LARRY J. DANIEL

Cannoneers in Gray

THE FIELD ARTILLERY OF THE ARMY OF TENNESSEE

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Preface

Visions of Civil War artillery often bring to mind such vaunted units as the Richmond Howitzers and the Rockbridge Artillery or such spectacular scenes as Colonel E. P. Alexander's artillery charge at Gettysburg. Few initially think of the Confederate barrage on the first day at Shiloh, although it was the largest in American history up to that point. Even fewer will recognize such names as James Hallonquist, Thomas Stanford, and Felix Robertson. Indeed, the artillery corps, or "long arm" of the Army of Tennessee, like the army itself, seems destined to live under the shadow of its sister army, the Army of Northern Virginia.

Long ago I determined that there was a story to be told. In my research, I soon discovered the obstacles that confronted the western artillery: lack of a militia base on which to build, few trained officers or even manuals, and inadequate and sometimes inferior ordnance. The corps that emerged, therefore, had leadership that was competent, but not spectacular, and often lacking in creativity. The battalion organization was slow in evolving and rarely used tactically. The batteries themselves were, with but two exceptions, volunteer companies, with no historical organization. The guns came from neophyte foundries that had previously manufactured only plows and farm implements. This stood in stark contrast to the chief supplier of Robert E. Lee's artillery—the famed Tredegar Iron Works at Richmond, which had supplied cannon to the Federal government. Thus, in the western Confederacy, the artillery corps had to be built from the stumps. Even within the Army of Tennessee, the long arm became, as one officer worded it, the "neglected branch of the service." Yet, it gave a creditable performance on the battlefield. If it did not dominate its Federal counterpart, and it never did,

it at least on occasions matched it—a remarkable feat under the circumstances.

In 1984 I first published *Cannoneers in Gray: The Field Artillery of the Army of Tennessee, 1861–1865.* I was subsequently thrilled to learn, especially considering that this was my first book, that I had become the recipient of the prestigious Fletcher Pratt Award of the New York Civil War Round Table, the Mrs. Simon Baruch University Press Award of the United Daughters of the Confederacy, and the Chicago Book Exhibit Award.

I have gone on to write four other books on the western theater, but, to be candid, my first love will always be the western long arm. I often feel like one of the spectators along the roadside during the 1862 Kentucky campaign who constantly greeted the marching column with the words: "Where is the artillery?"

Some time ago, I was talking with Wiley Sword, a noted Civil War historian. I asked him what project he was working on, and he mentioned that he would like to do a revised edition of his Shiloh book at some point. "There are so many new sources that have come to light," he said. I knew the feeling. Since writing *Cannoneers in Gray* in 1982 (published in 1984) I have uncovered much new material on the western artillerymen. This includes two diaries, four letter collections, four memoirs, and three individual but highly significant letters. Included in the last were letters written by Captain James Culpeper telling of his battery's involvement at Chickamauga; Captain Thomas L. Massenburg explaining how his battery got captured at Missionary Ridge; and an artilleryman who fought at Nashville. My thanks to Susan Matthews and Rett Floyd, without whom I would not have found the Culpeper letter. Another significant new source was the extensive memoir of W. W. Carnes, a Tennessee battery commander. I am indebted to William W. Carnes II for making this previously unpublished document available. In addition, the recent *Supplement to the Official Records* includes some previously unpublished After Action Reports of battery commanders, notably for the Battle of Missionary Ridge. In 1997, my friend Nat Hughes published his extensive history of the Fifth Company of the Louisiana Washington Artillery, which is titled *Pride of the Confederate Artillery.* It stands as the best unit history ever written for the western army.

When I approached the University of Alabama Press about doing an enlarged and revised edition of *Cannoneers in Gray,* they were highly receptive.

Without their cooperation, this project could not have been undertaken. This revised and enlarged edition is not just a rehash of the original book, with a few extra sources thrown in. Entire chapters, especially the battle chapters, have been rewritten. I have also added more biographical information on the artillery officers. In this edition, I also used some sources from Federal artillerymen who were on the receiving end of the Southern long arm. Their evaluation added a needed dimension.

The first reader (at my request) of the original manuscript version of *Cannoneers in Gray* was Richard McMurry, whom I did not know at the time, but who has since become a valued friend. When my son was born in 1986, Richard sent me a baby gift for what he called my "new cannoneer"—a gray pair of pajamas with a red strip down the leg. The official readers for the University of Alabama Press were Grady McWhiney, also now a valued friend, and the late Thomas L. Connelly. I am indebted to all of these scholars. My thanks also to Jim Ogden, historian at the Chickamauga-Chattanooga National Military Park and a true friend to all western historians, for calling my attention to the Carnes memoir and for helping me fix the locations of the Confederate batteries on Missionary Ridge.

Cannoneers in Gray

1
Birth of the Western Long Arm

During the spring and summer of 1861, Tennessee governor Isham H. Harris pieced together the provisional army of Tennessee. Under the Army Bill of May 6, the state called for fifty-five thousand volunteers, with twenty-five thousand of them to be armed and the remainder to be held in reserve. A vital, yet unheralded, dimension of this army was the Tennessee Artillery Corps. Formed in May 1861, the corps came to fruition slowly. Technically thirteen companies of militia artillery could be called on, but this was merely a paper force. The only unit actually organized and drilling was a Memphis German outfit called the Steuben Artillery, and it had only one old iron 6-pounder. On May 9, General Gideon Pillow, commanding the provisional army, reported that he had five thousand men under arms but not a single battery of field artillery.[1]

The most serious weakness of the corps would not be recruits but ordnance. The Nashville Armory possessed only four field guns. By mid-June, none of the companies that had been organized had received a single cannon. Several field artillery companies were assigned to man heavy artillery, and some received old flintlocks and drilled as infantry. At least one company gave up waiting and converted to infantry.[2]

Left largely to fare for itself, the state government turned to its citizens for help. T. M. Brennan & Company of Nashville, owned by thirty-four-year-old Irish-born and pro-Union (at least before the war) Thomas Brennan, furnished three six-gun batteries, complete with carriages and caissons, under state contract. Ellis & Moore of Nashville and Thomas, Webster & Company of Chattanooga each supplied a six-gun battery. Quinby & Rob-

inson, a Memphis foundry, contracted for thirty pieces, as well as an order for shot and shell.[3]

Local communities took interest in their new war industry. "We saw yesterday at the foundry of Mr. T. M. Brennan, in this city, a battery of cannon at his establishment," a Nashville correspondent reported in July. "The cannon were manufactured of iron from the works of Messrs. Woods, Yeatman & Co. and Hillman Brothers. . . . These cannon weigh about ten pounds more than brass guns of the same caliber. Mr. Brennan is making arrangements to turn out a complete battery each week, the casting, woodwork, and everything pertaining being done at his establishment." The next month, in Memphis, a reporter boasted of work at Quinby & Robinson. "We looked into Quinby & Robinson's shop yesterday and found eight beautiful brass cannon ready for the carriage, and twelve more in various states of forwardness. There were also three or four iron cannon on hand, one of them being of the peculiar kind known as the Parrott gun."[4]

As the state artillery companies became slowly equipped, they went to camps of instruction for drill. Typical was Captain Arthur M. Rutledge's battery (A, First Tennessee Artillery) from Nashville, which numbered 110 men. It was issued two 12-pounder howitzers and four 6-pounders, all iron pieces cast at the Brennan foundry. In May the officers and noncommissioned officers all posed for a photograph in Watkins Park. Some wore gray uniforms, some solid dark coats and pants and others a combination, but all had the red pant stripe denoting artillery. On August 7 a gunner wrote: "We have been here [Knoxville] two weeks—have a pleasant camp, good water and excellent drill ground. The horses are fast becoming accustomed to the firing of the cannon, and the gunners have done some target shooting which would have been creditable to more experienced marksmen."[5]

Thirty-eight-year-old Captain Smith P. Bankhead, a former attorney, graduate of a Virginia military school, and son of a regular army general, organized a battery in Memphis. Like so many other light artillery units, it had to serve initially as heavy artillery while awaiting fieldpieces. In the summer, the company returned to Memphis, where it received six bronze guns cast by Quinby & Robinson. That foundry also supplied Captain Marshall T. Polk's Tennessee Battery, comprised primarily of Hardaman County men.[6]

Some success was achieved in obtaining experienced field officers for the

Table 1. Artillery Corps of Tennessee—Captains of Field Batteries by Seniority

Officer	Commission
Arthur M. Rutledge	May 17
Marshall T. Polk	May 17
William H. Jackson	May 17
Smith P. Bankhead	May 17
Thomas K. Porter	July 18
Hugh L. W. McClung	July 25
Frank Maney	September 17
George Monsarrat	October 2
John Wesley Eldridge	November 20

state artillery corps, with Colonel Joseph P. McCown, Lieutenant Colonel Melton A. Haynes, and Major Alexander P. Stewart all being West Point graduates with service in the U.S. artillery. Of the twenty-two captains who eventually received state appointments, nine had college degrees, including three from West Point and three from the Virginia Military Institute. Among these were Captains Arthur M. Rutledge and William H. "Red" Jackson (West Point '37 and '54 respectively), thirty-year-old Captain Marshall T. Polk (University of North Carolina '56), and Captain Hugh L. W. McClung (Virginia Military Institute '58), twenty-one years of age. Three others were veterans of the U.S. Navy and had heavy-artillery experience. Lieutenant William W. Carnes, a twenty-year-old who departed the U.S. Naval Academy one year before graduation, was promoted to captain and given command of William Jackson's battery. Thomas K. Porter, formerly a lieutenant in the U.S. Navy, returned to Tennessee in time to receive command of a field battery organized in June in response to Governor Harris's second call for volunteers. Unfortunately, the state corps was soon raked with transfers to other branches. McCown and Stewart became brigadier generals in the infantry, and Jackson became a colonel in the cavalry. Indeed, only one (Smith P. Bankhead) of the initial twenty-five appointed officers in the state artillery would serve as field artillery officers in the Confederate Army of Tennessee (see table 1).[7]

Additional companies organized in the fall of 1861. John Wesley El-

dridge's battery established a recruiting office in Savannah, Tennessee, and signed up men from the four surrounding counties. On September 8 a Nashville newspaper noted that "only a few hundred more men are required to fill the Corps of Artillery of Tennessee. These are wanted mostly to be placed in the Camp of Light Artillery Instruction, near Nashville." Already the state had rushed into print Lieutenant Colonel Haynes's edition of *The Confederate Artillerist: Instructions in Artillery, Horse and Foot* to aid in training. By October 1, Harris's state army included thirty-eight infantry regiments, seven cavalry battalions, and sixteen artillery companies, but many of the last were still unarmed or manning heavy artillery. Indeed, the "heavies" were in competition with the field batteries for recruits. In comparison to the Virginia state army, which had forty-five batteries organized by June 1861, twenty-four of which were already in the field, Harris's efforts seemed eclipsed. Nonetheless, this modest nucleus of artillery served as the foundation of the Army of Tennessee's long arm.[8]

Eventually the Tennessee state army was incorporated into the Confederate army. Additional batteries arrived from other states, but recruitment in the artillery proved initially slow. There simply had not been an artillery tradition established in the west. In February 1862 an officer from Bankhead's battery arrived in Memphis to sign up fifty men "for immediate active service" to fill vacancies, the company being "otherwise well equipped with horse, guns, etc." Despite frequent appeals, the response proved negligible.[9]

A number of crack militia batteries existed in the South when the war began, including at least ten in Virginia. The most renowned militia artillery unit in the west was the famed Louisiana Washington Artillery of New Orleans (recruited to a battalion of four companies), but it was quickly whisked off to Virginia. The artillery corps of the Army of Northern Virginia thus had a small but efficient base of militia units upon which to build. If most of the men who formed these companies lacked battlefield experience, they at least enjoyed superiority in training, esprit de corps, and continuity of organizational existence. In comparison, the Army of Tennessee had only three militia batteries.

Before leaving for Virginia, the Washington Artillery left behind twenty men to form the nucleus of a fifth company. Leading the battery would be Captain W. Irving Hodgson, twenty-seven years old and a former auction-

eer, and First Lieutenant Cuthbert H. Slocomb, a thirty-year-old hardware dealer. Hodgson, whose business association with Major J. B. Walton, the commander of the battalion, clearly landed him the position, possessed some personal skills that served in the recruitment of men; he was also a good organizer. Related to the last, he sent representatives to the state capital, the New Orleans city council, and prominent merchants to lobby for funds. By the fall of 1861, the company boasted six guns, with carriages and caissons complete. At this stage the Fifth Company remained a state militia battery and served as a reserve for the parent battalion in Virginia. When a call went out in the spring of 1862, the unit promptly responded. The 155-man complement attended services at the First Presbyterian Church on May 6. The next day, the men boarded a train amid the cheers of hundreds of spectators, and they were soon on their way to join the Confederate concentration at Corinth, Mississippi.[10]

The Washington Artillery of Augusta, Georgia, organized in 1854, also joined the army at Corinth. The men drilled and paraded monthly in their dark blue uniforms. The blue jackets were later swapped for gray ones and the company transferred to General Braxton Bragg at Pensacola, Florida. He foolishly attempted to convert the company to infantry, but relented when the men requested a transfer to Virginia. Like their counterparts from New Orleans, the Augustans were soon boarding railroad cars for Corinth. The other company was the Jackson Artillery of Macon, Georgia, established in January 1860. It would link up with the Army of Tennessee in 1863 as Massenburg's battery.[11]

Due to the lack of a militia base, the foundation of the western artillery became the volunteer company. Most of the men were young. In Captain Charles Semple's Alabama Battery, nearly 60 percent of the unit was less than twenty-five years of age. Nineteen-year-olds accounted for a fourth, with a sprinkling of seventeen-year-olds, though the average was twenty-two. In another company, Stanford's Mississippi, 77 percent of the men reported under age twenty-five, with 35 percent of the privates being eighteen- and nineteen-year-olds.[12]

The batteries varied according to the men and their backgrounds. In August 1861, the Pointe Coupee Artillery, under Captain Richard A. Stewart, arrived in Memphis aboard the steamer *Prince of Wales.* The hundred men comprised planters, sons of planters, lawyers, doctors, and so on, with

a cumulative wealth in excess of $15 million. Popular perception to the contrary, and despite a newspaper ad for "select young men," the men of the Fifth Company Washington Artillery were largely middle- and working-class people, including forty-seven clerks, ten merchants, eleven students, three river pilots, eight artisans, and thirty-one laborers. There was a sprinkling of professionals—two doctors, five lawyers, and three planters. A social gulf existed in positions, with the officers being the prominent and the educated, and the drivers, with their task being considered menial, comprising immigrants and laborers. Jackson's Tennessee Battery embraced a group of Memphis Germans, the Orleans Guard Artillery was heavily infused with French, and Watson's Louisiana Battery comprised mostly Irishmen.[13]

Wealthy Louisiana plantation owner and notorious gambler Gustavus C. Watson paid for the organizational expenses of a New Orleans battery that bore his name. The men displayed a "W" on their caps, although Watson himself signed on as a private. The company comprised men from some of the finest Creole families in the city. The unit, 190 strong, departed New Orleans on August 15, the men thinking that they were headed for the Virginia front. They instead went to Memphis and subsequently to Columbus, Kentucky.[14]

Jackson's Tennessee Battery comprised a hodgepodge collection of men. A group of sixteen Memphis Germans had come from the old Steuben Artillery of that city. Unfortunately, they hailed from different sections of the motherland and constantly wrangled with each other. Other members came from St. Louis and Arkansas, and one came from southern Illinois. There were several other foreigners and a couple of infantry transfers who reportedly "preferred artillery." Captain Jackson later learned that they had been dismissed from their regiments as troublesome alcoholics. They would continue their former habits.[15]

Most of the batteries hailed from cities: Bankhead's Tennessee and the Pillow Flying Artillery from Memphis, McClung's Tennessee from Knoxville, Rutledge's Tennessee and the Harding Light Artillery from Nashville, the Fifth Company Washington Artillery and Orleans Guard Artillery from New Orleans, and from Mobile the artillery companies of Charles P. Gage, D. D. Waters, and William H. Ketchum. Occupations reflected their city background. The Augusta Washington Artillery counted among its ranks

blacksmiths, molders, machinists, carpenters, tailors, bookmakers, printers, and butchers.[16]

A sense of curiosity drew some to the long arm. When a gun crew recruited in Pontotac, Mississippi, in the summer of 1861, they found that their bronze fieldpiece served as a drawing card. Eager young men flocked around it like children around a toy. A recruit observed that "the idea of possessing such fine guns enthused the men much. They had seen infantry and cavalry, but never an artilleryman."[17]

The Jefferson (Mississippi) Flying Artillery initially went into camp six miles from Fayette, Mississippi. "We had a jolly good time for two weeks with plenty of visitors and an occasional dance," remembered member Thomas B. Hammett. A canvas was stretched and used as a target, and the men attempted several shots with their single howitzer. "Captain [William] Harper called me, then lately from the Kentucky Military College," Hammett continued. "I responded and accidentally my shot took the target down. To this I attribute the captain's making me a battery sergeant, then the youngest member of the company."[18]

Once formally accepted into Confederate service, the batteries moved to their assigned designations. Captain Charles Swett's Warren (Mississippi) Light Artillery, whose wealthy father had the company equipped at his son's request, was ordered to Kentucky. Lacking guns and caissons, the men marched through the streets of Vicksburg as infantry. As the troops boarded a river steamer for the journey north, a large crowd of relatives and well-wishers saw them off. A similar scene occurred at Grenada, Mississippi, on November 7 as Stanford's battery boarded railroad cars for Columbus, Kentucky. "At 3 o'clock the long whistle sounded the signal to start. The parting embrace and fervent kiss were given—tears stood in the eyes of many, and the waving handkerchiefs commenced as the train moved slowly off," described John E. Magee, a twenty-three-year-old private. The journey from Nashville to Knoxville proved quite enjoyable for the men of Rutledge's battery. "Old men and old women, young men and blooming maidens, greeted us at every depot, and all along the road, throwing bouquets with inspiring mottos attached, luscious apples in rows on sticks and strings and many other delicacies, into the cars as we passed," noted a private.[19]

The men soon reported to their assigned camps and began the routine

of drill. "The weather is scorching hot. Two or three of Captain Bankhead's Artillery dropped on the drill ground from excessive heat & our men were not far behind them," Private Joseph Garey of Hudson's Mississippi Battery noted in his diary on August 3. That same month, a cannoneer in Swett's battery related: "Drilled often and became accustomed to the various maneuvers in the artillery drill." Stanford's battery initially possessed only one gun and sixty-five horses and thus drilled as infantry while awaiting the balance of their ordnance.[20]

A recruit in the Fifth Company Washington Artillery noted that a gun crew comprised eight men in addition to a corporal and a sergeant. He described their duties thus:

> "No. 1" rammed and sponged out the gun when foul, the sponge staff having a rammer at one end and sponge at the other. "No. 2" loaded, or put the charge in, standing at the left of the muzzle. "No. 3" stood behind "No. 2" at the reinforce of the piece with his thumb (a little pad on it) on the touch [vent] hole while the loading was going on. "No. 4" stood behind No. 1 and opposite No. 3, put in the friction primer and pulled the lanyard. "No. 5" was at the trail and moved it from right to left as the corporal, who always sighted the gun, directed. He had a hand spike for this purpose. "Nos. 6, 7, and 8" carried the ammunition from the limber chest to the gun, and when the limber chest was out, from the caisson.[21]

The Hudson battery had not been in camp long before the men had their first false alarm; it would not be their last. Wrote Private Garey: "We took up our position on the wharf [New Madrid], unlimbered our guns & prepared for action, when up came our rival company (Capt. Bankheads) under full headway, but they soon found that we had stolen a march on him by being a little quicker than he was & he had to send three guns of his battery to the rear, about ten miles, & take a position on the edge of a swamp, where they were not very likely to get a chance to show their prowess, which was everything but gratifying to him." From his camp in Kentucky, a private in the Warren Mississippi Light Artillery related in his diary on November 1, 1861: "Orders came (while it was raining very hard) to harness and hitch up quickly. Proved to be a false alarm." On the tenth he wrote: "Another

false alarm. Raining as usual." Again on the twenty-first he wrote: "Another false alarm at 11 at night."[22]

Albert Fall, a gunner in Porter's Tennessee Battery, found his initial camp experience at Bowling Green, Kentucky, relatively pleasant. "I still sleep in Captain [Thomas] Porter's tent, & we frequently sit up and talk half the night. He is very kind, and explains everything I ask him about. I am already pretty well drilled, and we have no difficulty in giving the necessary commands. Two of the sergeants go with the horses to water morning & evening, and we all have to see that the horses of our attachments are properly fed and curried," he wrote his father on December 19. One thing he knew for sure—"I had much rather be a Sergeant in Artillery than Captain of infantry." He proudly noted to his sister that his gun had "beaten the battery" in target practice. "I sight it myself after the corporal had pointed it." The scarcity of ammunition limited practice, however, and Stanford's battery entered the Battle of Shiloh never having fired their pieces![23]

Private Garey related his company's experiences in target practice. "We are going out target shooting this evening with our battery, which promises some rare sport. As we have not had the opportunity of trying them on the Yankees, we expect to try them at any rate to find out how we can shoot, though we are noways anxious [confident] to know the result as we are pretty good marksmen having tried them once before at short range," he elated on October 8, 1861. The next day he embarrassingly recorded the results. "Our boys were a little mistaken in their marksmenship yesterday, their shots not being as good as they anticipated by ranging rather wildly for a first class gunner. The distance was four hundred yards & the mark about eight feet square & the closest shot being about eighteen inches from the mark."[24]

Besides the Tennessee officers previously mentioned, a few captains had military training. Captains Melancthon Smith, a former Mississippi cotton planter and state legislator, and thirty-three-year-old Charles Swett were both West Point graduates, and Captain Charles Lumsden, a twenty-two-year-old who would lead an Alabama battery, graduated from the Virginia Military Institute. Even Swett conceded that all were largely ignorant regarding the proper drills. Most officers, however, came from civil occupations and had no formal training at all (see table 2).[25]

Many western artillery officers were therefore as ignorant of the drills as

Table 2. Select Officers and Their Backgrounds

Officer	1861 Age	State	Civil Occupation	Artillery Rank
Joseph Palmer	30	Ga.	Doctor	Major
Robert Cobb	23	Ky.	Farmer	Major
John W. Johnston	23	Va.	Lawyer	Major
Ruel W. Anderson		Ga.	Farmer	Captain
S. H. Dent	28	Ala.	Lawyer	Captain
Putnam Darden	25	Miss.	Farmer	Captain
Thomas L. Massenburg	25	Ga.	Druggist	Captain
Henry Semple	39	Ala.	Lawyer	Captain
Thomas Key	35	Ark.	Newspaper Editor	Captain
Minor W. Havis	32	Ga.	Doctor	Captain
James P. Douglas	25	Tx.	Principal	Captain
L. G. Marshall		Tenn.	Newspaper Editor	Captain
Edmund Baxter	23	Tenn.	Attorney	Captain

were their men. At Bowling Green, artillery officers obtained several copies of books on artillery drill in the U.S. Army, but some officers seemed beyond help. "Soon after we began to drill, it became evident to the company, that [Lieutenant Hugh R.] McSwine was not qualified to fill the position to which he was elected," lamented Sergeant W. H. Brown of Stanford's battery. "The company drill was a profound enigma to him. . . . He could not give commands for the most simple movements. With the company on the drill ground he was completely befogged. . . . [The troops] would indulge in noisy laughter at his expense." The majority of the men signed a petition calling for his resignation, but to no avail. After the Battle of Shiloh, a gunner in the Louisiana Washington Artillery complained that Captain Hodgson gave "but few orders during the two days and those he did give were not to his credit."[26]

In some cases the problem was not inexperience, but perceived brutality. A gunner in Lumsden's Alabama Battery thought Captain Charles Lumsden to be "intemperate, profane, and abusive of his men." In Watson's battery the commander was Captain Daniel Beltzhoover, a West Pointer with eight

years experience in the First U.S. Artillery. So disgusted were the men with his "rough and unfeeling" treatment of them that forty signed a petition in October 1861 requesting his dismissal. A nasty fight later erupted between the captain and a sergeant in the battery. Beltzhoover nonetheless retained his position until later promoted.[27]

Officers and men alike could behave badly. On Christmas Day 1861, Private Garey disgustedly jotted in his diary: "Today is Christmas & with the exception of three or four, every man is drunk in the company & trying [to see] how bad they can act." Two days later he wrote: "Some to vex the officers & others from anger & a few from the love of the 'critter' have got gloriously drunk." Again on the thirtieth he noted: "About two-thirds of the company were glowing drunk all day on Saturday [28th], making a splendid picture for a comic almanac, though we made very good time, traveling about twenty miles."[28]

Even more difficult than recruiting, organizing, and training the batteries was equipping them. The armories of the western Confederacy, both state and federal ones, were all but deplete of artillery ordnance. At the start of the war, Mississippi had only two 12-pounder howitzers and six 6-pounders. Not a caisson, battery wagon, or forge was available in the state. Louisiana claimed the capture of some fieldpieces at the Baton Rouge Arsenal, but these were issued to the Washington Artillery Battalion before it went to Virginia. Georgia counted only a dozen field guns.[29]

Some companies took what they could get. All four guns of Trigg's Arkansas Battery were survivors of the Mexican War. Bledsoe's Missouri Battery possessed an old 9-pounder that had been captured from the Mexicans. A long gun of Spanish make, it was now covered with dents and scratches. Bored out to the caliber of a 12-pounder howitzer, it made a peculiar ringing sound when fired. The Helena Light Artillery acquired a 12-pounder howitzer that had adorned the campus of the Arkansas Military Institute. The governor of Arkansas shipped to Memphis a dozen old field guns—two iron 6-pounders, one bronze 6-pounder, and nine bronze 9-pounders, all of Mexican War vintage—and the governor of Mississippi dispatched a four-gun 6-pounder battery.[30]

The primary supplier of cannon was the Tredegar Iron Works of Rich-

mond, which had long made cannon for the federal government. Initially Tredegar concentrated on the production of heavy seacoast artillery, leaving the western army to fare for itself. Captain William Richardson Hunt, ordnance officer at the Memphis Arsenal, warned that a more concerted effort must be made to obtain ordnance. He recommended that contracts be signed for fifty field batteries, each to consist of six guns, with four hundred rounds to the piece. The cost of each battery complete with carriages and caissons would total $15,500. To accomplish this, agents would have to be sent to Memphis, Nashville, Vicksburg, New Orleans, Montgomery, Mobile, and Huntsville.[31]

During the fall of 1861, the Confederate government belatedly bestirred itself to assist the west. Contracts were signed with a number of private firms, loan money was advanced, and drawings and molds were supplied. Dozens of field guns were soon in the process of delivery. By October 1, the Memphis Arsenal had outfitted and shipped fourteen field batteries. Most of the guns came from the Tredegar plant at Richmond and from Quinby & Robinson. In November a six-gun battery made at Noble Brothers of Rome, Georgia, arrived.[32]

Quinby & Robinson remain a major supplier, but a late September fire destroyed both the foundry and machine works. The plant was soon rebuilt and supplied seventy-seven field guns under Confederate contract before the city fell. Byrne's Kentucky and Guibor's Missouri both received Quinby & Robinson guns. Comparing the guns to those made at the Tredegar plant, a Memphis reporter declared: "For beauty, and finish, and general appearance the Richmond cannon cannot compare with those made here." The same could not be said of the six iron guns cast by Street, Hungerford & Company of Memphis and supplied to Jackson's Tennessee Battery. Three of the pieces burst within a month. The Brennan foundry also continued to cast until the city fell, eventually supplying seventy-one iron pieces.[33]

Two New Orleans foundries produced field guns—Leeds & Company and John Clark & Company. The former, founded in 1823 and employing three hundred men at the commencement of the war, furnished forty-nine bronze fieldpieces (including a dozen 12-pounder Napoleon guns) by April 1862. These were issued to, among others, the Louisiana Washington Artillery, Gage's Alabama Battery of Mobile, and Robertson's Florida Battery. John Clark converted from the production of furnaces, grate bars, and cotton

presses and by March 1862 had cast one hundred field guns, including those issued to the Orleans Guard Artillery and Watson's Louisiana Battery.[34]

Noble Brothers & Company of Rome, Georgia, widely known for its 3-inch rifles, also cast 6-pounders (iron) and 12-pounder howitzers. By January 1862, a complete six-gun battery could be completed every three weeks. Some fifty-eight field guns had been delivered to the Confederate government by October 1862. Reading & Brother of Vicksburg likewise supplied forty-eight fieldpieces.[35]

Eighty percent of the fieldpieces turned out by the five major western Confederate foundries were smoothbore cannon, mostly of the U.S. Model 1841 6-pounder and 12-pounder howitzer type. These were the tried and tested weapons of the day, and Confederate authorities seemed reluctant to advance to more modern types. The 6-pounder had a range of fifteen hundred yards, whereas short-barreled howitzers, first used by the French around 1800, fired shell and case shot at ranges of one thousand yards. The greater distance and accuracy of rifled cannon had long been recognized, but there were drawbacks. Fuses were imprecise, causing the shells to burst prematurely in the air or bury themselves in the ground before exploding. Canister, the most deadly type of projectile at short range, was not as effective when fired from a rifled gun. Also, in the thickly wooded terrain in which most western battles were fought, the added range of rifles had little use. In that instance smoothbores were more effective because they could fire larger projectiles and more canister with deadly effect.[36]

In addition to these fundamental difficulties, western foundries experienced some unique ones. Most of the rifled guns turned out were nondescript, bronze 6-pounder rifles, 3-inch rifles, and 3.3-inch rifles in which the lands and grooves of the rifling more quickly wore out. In addition, the type of rifling, length, and dimensions varied from foundry to foundry. They also lacked the refined machinery for precise rifling. In iron rifles, the quality of the ore was often so poor that weak castings resulted.[37]

The production of bronze cannon was predicated on the availability of copper, and shortages were experienced at an early date. General P. G. T. Beauregard issued a call to the citizens of the Mississippi Valley for bells to be melted down for cannon. General Braxton Bragg considered this move to be sensationalistic and unnecessary, but the public fully endorsed it, and courthouses, factories, public institutions, churches, and plantations quickly

responded. Several acres of bells were collected at the New Orleans wharf. Enthusiasm even exceeded practicality, for one Mobile foundry worker stated that most of the household utensils being received were simply worthless. "There is no gun metal in them and we are daily refusing such articles."[38]

Such were the men and units that made up the artillery of the Army of Tennessee, and such was the manner in which they were organized, trained, and equipped. It was not an imposing start. Southerners, especially those in the west, were simply not as adept in artillery techniques as their Northern counterparts. Vital heavy machinery and refined machinery were also limited. It remained to be seen whether valor and enthusiasm could overcome such deficits.

2
"The Battery Was the Common Target"

By November 1861 General Albert Sidney Johnston, commanding the immense Department No. 2, which stretched from the Alleghenies to the Ozarks, had established a line across the southern border of Kentucky. Lieutenant General Leonidas Polk's corps anchored the left at Columbus, on the Mississippi River, and Lieutenant General William J. Hardee's corps held the center at Bowling Green, seventy miles north of Nashville. In eastern Kentucky, Brigadier General Felix Zollicoffer posted his division near Mill Springs, on the north bank of the Cumberland River.

Johnston's supply of field artillery remained woefully inadequate. Despite pleas to the secretary of war, Zollicoffer's division still had only one battery—Rutledge's Tennessee. Hardee's corps at Bowling Green possessed seven batteries, including two incomplete ones—Byrne's Kentucky with three guns and Porter's Tennessee with two pieces. Stationed at Fort Donelson on the Cumberland River was Maney's Tennessee Battery, an understrength outfit of forty men, four guns, and no horses.[1]

Johnston worked feverishly to build up his forces, including the artillery. Major Francis A. Shoup's battalion of two four-gun Arkansas batteries, Captain T. Trigg's Clark County Light Artillery armed with old Mexican War pieces, and Captain George T. Hubbard's Jackson Light Artillery of Little Rock arrived at Bowling Green. Byrne's battery received three additional cannon, and H. B. Lyon and Robert Cobb organized another Kentucky battery. Captain William Harper's Jefferson (Mississippi) Flying Artillery, on the way to Virginia, was diverted to Bowling Green. In late December 1861, John H. Guy's Goochland (Virginia) Light Artillery boarded railroad cars at Dublin, Virginia, for assignment to Johnston's army.[2]

Other batteries were in the process of formation, but the problem, as always, remained a shortage of ordnance. In October, Brigadier General Simon Buckner requested field guns for the Bowling Green defenses; none arrived. By November, Captain John W. Eldridge's Tennessee Battery still remained in Memphis, awaiting guns. Of the two batteries at Clarksville, one had no guns or caissons; the other possessed six cannon, but only sixty rounds of ammunition and harness for four teams. In Knoxville, Captain George Mansarrat's personnel strength of 250 men was sufficient to form two companies of light artillery, but he possessed only four guns and three caissons.[3]

Experienced officers had to be found for the expanding artillery. The emerging figure at Bowling Green became Major Francis A. Shoup, a twenty-seven-year-old who had formerly been a Florida lawyer. The Indiana-born Shoup had graduated from West Point (class of '55) and served in the First U.S. Artillery, with garrison duty at Key West and Fort Moultrie. Although he had seen no combat and conceded that he was "ignorant of war," he made an excellent drill officer, which was sorely needed. Several copies of U.S. artillery tactics arrived at Bowling Green, and the batteries frequently drilled every day, Sundays included.[4]

The organizational hodgepodge that existed in Johnston's army was clearly evident in the artillery. The number of guns per battery varied from three to seven. Johnston established no administrative guidelines. In Hardee's corps, Simon Buckner's division had no artillery, but John Bowan's single brigade had five batteries! A similar situation existed in Polk's corps. The First Division, actually only brigade-size, had one battery attached, whereas the Second Division, of similar size, had four batteries.[5]

The traditional, but generally inept, brigade-battery structure would be adopted. Under this concept, batteries were assigned to, received rations from, and operated with specific infantry brigades. The artillery thus became merely an extension of the infantry. Possessive brigadier generals often resented any attempt to send their batteries elsewhere, regardless of the need. The scattering of batteries throughout the army created uncertain lines of authority between infantry and artillery officers. Most important, the brigade-battery structure discouraged the massing of guns in battle.[6]

Johnston's raw troops were soon to be tested. On November 7, 1861, a Union force under Brigadier General Ulysses S. Grant attacked a Confeder-

ate brigade at Belmont, Missouri, opposite Columbus. Confederate infantry, accompanied by Watson's six-gun Louisiana Battery, crossed the river and deployed. Bad luck seemed to plague the artillery from the start. The supply of ammunition was quickly depleted. At two in the afternoon a major thrust shattered the Confederate line and overran the battery, leaving forty-five dead horses in the wake. One of the officers, Lieutenant C. P. Ball, became seriously injured when an out-of-control caisson ran over him.[7]

As the Federal gunboats *Tyler* and *Lexington* steamed down the river, they met the fire of A. P. Stewart's heavy artillery and the field batteries of Smith's Mississippi, Jackson's Tennessee, and Stewart's Point Coupee Louisiana. "We received no damage and did the enemy very little as their boats went back after one or two shots," wrote one of the Mississippi gunners. One of Jackson's feeble Parrott guns, made in a Memphis foundry, burst on the second round, killing three men and wounding one. Shortly after, one of Stewart's Parrott guns shattered into numerous fragments, killing one and wounding two. The secessionists received reinforcement, but no additional artillery could be landed, because the gangplank of the steamer carrying Jackson's battery fell into the river. Nevertheless, Grant's troops were driven back and four of Watson's guns recovered. The next action came on Johnston's opposite flank. On January 19, 1862, George Crittenden's forty-six-hundred-man Confederate division advanced to Mill Springs, Kentucky, in a preemptive strike against George Thomas's Federal division of roughly equal size. Accompanying Crittenden were four guns from Rutledge's battery and two from McClung's, leaving behind McClung's other section and Baxter's six-gun Tennessee Battery. The surprise attack on the Yankee encampment was soon checked and turned into a rout. A driving rain and thick forest cover all but immobilized the artillery. Arthur M. Rutledge's and Hugh L. W. McClung's Tennessee batteries barely fired a shot. During the pell-mell retreat that followed, Rutledge abandoned one piece. Behind their entrenchments at Beech Grove, the Rebel artillery opened an ineffective and sporadic one-hour response to three Federal batteries. During the night the Southerners escaped across the Cumberland River via a steamer, leaving behind (including the previous gun) twelve pieces (four iron 12-pounder howitzers, two 10-pounder Parrott rifles, two bronze 6-pounders, and four iron 6-pounders), as well as forty-five of McClung's horses.[8]

In both actions, the artillery had been given only slight opportunity to

show what it could do. Worse yet, several batteries would now have to be reequipped. Johnston wrote Josiah Gorgas, in Richmond, requesting "a field battery of Anderson [Tredegar] guns to fill the place of those lost [at Mill Springs]." It proved an ignominious beginning for the western long arm.[9]

By January 1862 the Federal buildup in the west had become alarming. Johnston's 45,000 scattered and poorly armed troops in western and central Kentucky faced a force nearly 125,000 strong. Johnston had fourteen thousand men at Bowling Green, fifty-five hundred at Forts Henry and Donelson, eight thousand at Clarksville and vicinity, and seventeen thousand at Columbus.

On February 6, a Union army under Grant breached the defenses at Fort Henry, on the Tennessee River. Attention now focused on nearby Fort Donelson, on the west bank of the Cumberland River. By the thirteenth, Johnston had funneled seventeen thousand troops there under the command of John B. Floyd. Commanding the river to the north, the Confederates mounted thirteen heavy guns, with two nondescript fieldpieces within the fort. On the land side were 6 field batteries of 475 men and 31 guns: Porter's Tennessee (113 men and 6 guns), Graves's Kentucky (70 men and 6 guns), Maney's Tennessee (100 men and 4 guns), French's Virginia (58 men and 4 guns), Green's Kentucky (76 men and 7 guns), and Guy's Virginia (58 men and 4 guns).[10]

Several of the Army of Tennessee's future high-ranking artillery officers served at Donelson. The popular, twenty-three-year-old Rice Graves, who had resigned from West Point at the beginning of the war, would later be promoted to major and serve as a division artillery chief. Captain Thomas K. Porter, an Annapolis graduate, would likewise receive a major's commission and lead an artillery battalion at Chickamauga. Eighteen-year-old Lieutenant John W. Morton, of Porter's battery, would become chief of Nathan Bedford Forrest's horse artillery.[11]

Grant's two divisions (seventeen thousand troops and seven batteries) were well up to the fort by February 13. The army spent the day in establishing a position and engaging in long-range artillery duels, during which Graves's battery disabled a howitzer in Battery D, First Illinois Light Artillery. Meanwhile, Lew Wallace's Third Division came up the Cumberland to reinforce the Northerners.

A brief action occurred on the thirteenth, when the Federals made a foray against the Rebel center, especially targeting Frank Maney's annoying guns. "The battery was the common target," Wallace declared. Maney's guns occupied the vertex of a V-shaped fortification, bordered by two steep ravines. Before the Union infantry cleared the woods, the Tennessee gunners opened with a rapid shelling, while Graves's and Porter's batteries join in an enfilade fire. Maney's cannoneers, silhouetted against the sky, were rapidly picked off by sharpshooters. So many fell, including Maney and two lieutenants, that the survivors worked only two of the four guns. The attack was repulsed, but at a high cost to the artillery.[12]

That night, the mercury plunged to ten degrees, and two inches of snow blanketed the ground. Throughout the fourteenth, the opposing armies seemed paralyzed by the bitter cold. The scene now shifted to the river defenses. At three in the afternoon, the Federal fleet steamed toward the fort and opened fire. As the range closed to four hundred yards, the Rebel "heavies" returned fire. For an hour a deafening roar thundered across the Cumberland bluffs. So terrible was the gunboat fire that Floyd wired Sidney Johnston that the fort could not possibly hold twenty minutes. To everyone's surprise, however, when the smoke cleared, the river batteries remained intact, and the crippled fleet was steaming back downriver.[13]

Despite the success of the shore guns, a threat still existed from the land side. The garrison was now in danger of being trapped. The Confederate command decided to drive back the Union right wing and reopen the road to Nashville. During the night the graycoats massed on the left. Before daybreak on the fifteenth, Gideon Pillow's ad hoc division attacked, supported by Buckner's division in the center. A section of Green's battery moved forward to an open field and a ridge and became hotly engaged. A shot from the enemy's artillery burst in their midst, killing and wounding several men. The remainder of the crew panicked and fled to the rear. Pillow obtained enough volunteers from Guy's battery to man the abandoned guns.[14]

By early afternoon, the Union right had crumbled, leaving only a single battery to command Wynn's Ferry Road. Nathan Bedford Forrest's charging troopers sabered the blue cannoneers at their guns. Even though Charlotte Road was now completely in Confederate possession and the avenue of escape was open, Pillow incredibly ordered his troops back into the trenches. "The general opinion among the Colonels seemed to be that Gen. Pillow was

so elated with the success of the attack, that he abandoned the idea of retreating," noted Captain John H. Guy, commanding a Virginia battery.[15] Buckner's men returned to find that the skeleton force left behind during the assault was hastily falling back before an advancing Federal division. Unable to repel it, the Southerners occupied a hill overlooking their original position. A section each of Graves's and Porter's batteries unlimbered under a withering fire. All of Porter's horses were shot down, and the guns had to be rolled into position by hand. Within minutes, Porter and thirty-three of his forty-eight effectives fell. Turning command over to young Lieutenant John Morton, the captain uttered: "Don't let them have the guns, Morton!" "No, captain, not while I have one man left," came the reply. Night ended the fighting.[16]

The next day the inept Confederate leadership surrendered the garrison of fifteen thousand. To that number must be added about two thousand killed and wounded. Although a dozen or so of Porter's men escaped the night before with Forrest's cavalry, and both French's and Guy's cannoneers managed to board steamboats and flee with Floyd and his Virginians, the fate of most of the cannoneers was captivity. Fort Donelson had not just been a defeat, but a catastrophe. Regarding the artillery, a large quantity of ordnance fell into Grant's hands, including thirty-three fieldpieces. These losses, coupled with those at Belmont and Mill Springs, meant that Johnston's long arm, as with the army as a whole, had been reduced a third.

Johnston pulled Hardee's corps back to Nashville. A depressed Private George Grammar of Swett's battery noted the rain and cold on the night of February 17 as his battery passed over the Nashville suspension bridge. The newly arrived General P. G. T. Beauregard, Johnston's second-in-command, took charge of withdrawal operations of Polk's corps at Columbus. Every one of the 140 field and heavy guns was miraculously saved, the heaviest being taken downriver to New Madrid and Island No. 10. Bankhead's battery arrived safely, but the boat transporting Captain Richard "Black Dick" Stewart's Point Coupee Artillery sprang a leak, causing the loss of one gun and all the ammunition. The news from Middle Tennessee proved even more bleak. When Johnston evacuated Nashville, he abandoned twenty-four siege guns and sixteen iron 6-pounders, mostly unfinished Brennan guns.[17]

On the night of March 13, 1862, the Confederates abandoned New Madrid, Missouri. "It was more like a rout than an evacuation. Everybody

seemed to be panic struck but a few," described Lieutenant William Polk of Bankhead's battery. The company's field guns were saved, but the caissons and limbers had to be dumped into the river. In early April, the remaining garrison of Island No. 10 capitulated. With it went some forty-five hundred men, ninety-one heavy guns (twenty-six of which had never been mounted), the six fieldpieces of Captain J. W. Stewart's company, and two field guns aboard a steamer. Although the tally fell far short of the exaggerated Northern claim of 123 heavy and 35 field guns, the news was bad enough.[18]

During the first year of the war, the western Confederate artillery did not prove a significant tactical factor. In the actions at Belmont, Mill Springs, Fort Donelson, and Island No. 10, the batteries did little or no tactical maneuvering. Time was needed for the long arm to come of age.

3
Missed Opportunities

Throughout March 1862, Corinth, Mississippi, bustled with activity. Troops from across the western Confederacy massed there in a determined effort to arrest and roll back the relentless Union drive. During the previous weeks General Beauregard had revamped the army, including establishing guidelines for the artillery: at least four or six guns as the standard composition of each battery. The reorganized artillery of Polk's corps comprised four batteries, with 446 men, 347 horses, 24 guns, and a like number of caissons.[1]

Meanwhile, Hardee's corps, led by Johnston himself, slogged over rain-soaked roads through south-central Tennessee. The retreat from Murfreesboro, Tennessee, proved tediously long. At Decatur, Alabama, the artillery had to be loaded on railroad cars and taken across the Tennessee River. From there to Courtland, Alabama, some of the batteries moved overland until heavy rains bogged down the column. The batteries thus had to be reloaded on railroad cars for the final leg into Corinth. At Burnsville, Mississippi, twelve miles southeast of Corinth, the train carrying Captain Charles Swett's Mississippi Battery collided with the eastbound passenger train. Several cars were smashed, but the men and guns escaped damage. Hardee's artillery included thirteen batteries with about forty-four guns. Major Francis Shoup's battalion of three batteries had dwindled to barely 150 effectives. Robert Cobb's Kentucky Battery, with 121 on the roll, counted only 98 effectives.[2]

General Bragg's corps arrived from Pensacola and Mobile. His artillery included the Augusta Washington Artillery; a Florida battery led by the ambitious twenty-two-year-old Felix H. Robertson; and two Alabama batteries, William H. Ketchum's and Charles P. Gage's, from Mobile. Captain

Charles Lumsden's Alabama Battery, stationed in that city, had received a promise to go to Corinth, but at the last minute was bumped by Gage's company. Lumsden's men attributed the switch to "political pull."[3]

Major General Daniel Ruggles arrived from New Orleans with five thousand infantry and three batteries: Captain G. Ducatel's Orleans Guard Artillery, Captain Samuel G. Bain's Vaiden (Mississippi) Light Artillery, and Captain W. Irving Hodgson's Washington Artillery (Fifth Company). The latter received its guns and horses while at Grand Junction, Tennessee, barely two weeks before going into battle. A rivalry developed between Hodgson's and Ducatel's companies. "We do not have anything to do with each other, as they are jealous of us, and think themselves far superior, in fact imagine themselves as heroes, but cannot get over the idea that we left the city before them," wrote Washington Artillery member Hildreth Green to his father.[4]

The Washington Artillery voted to march the forty-two miles from Grand Junction to Corinth rather than take the railroad. "Some of the men did not ride any part of the way, desiring to test themselves, others only occasionally and a few walking but very little," Green noted. The march demonstrated that saddle horses could not take the strain of hauling guns, and they had to be exchanged with draft animals as soon as possible.[5]

By March 23 the unprecedented concentration had been completed, with forty thousand effectives assembled. The enlarged artillery corps now included twenty-three batteries, about 122 guns, and two thousand men. Two-thirds of the companies had six guns, and one-third had four guns. About 85 percent of the armament comprised smoothbore 6-pounders and 12-pounder howitzers.[6]

Many of the men did not care for Corinth. A Tennessean noted that a hole dug two feet deep in any direction would bring "terribly unwholesome water" bubbling up. About 10 percent of the artillerymen were stricken with illness. The horses almost refused to drink the foul water. Because the mud contained acid minerals, the horses' hair fell out. Each night the animals were carefully washed and groomed, but the problem persisted. "We are suffering very much for water. What little we get is awful and I am afraid it will make us all sick," described a member of Stanford's battery.[7]

Everyone sensed that a big fight loomed. Even now, Grant's army was only twenty-two miles north, encamped at Pittsburg Landing, on the Ten-

nessee River. Johnston faced a serious predicament. If Don Carlos Buell's Army of the Ohio made a move into northern Alabama, Corinth would be outflanked. If he moved to unite with Grant, the Confederates would be facing an overwhelming seventy thousand troops. If the latter were the case, a preemptive strike would be imperative.

Beauregard was assigned the responsibility for organizing the force. The troops, christened the "Army of the Mississippi," were unevenly divided into four corps under Polk, Bragg, Hardee, and John C. Breckinridge, though the last two were actually division size. It would prove to be a cumbersome arrangement. Beauregard failed to adapt a battalion structure for the artillery, continuing to assign a battery to a brigade. His rationale was that the nature of the terrain and the inexperience of the officers made it necessary to subdivide the batteries in order "to obtain even a partial benefit from their presence in the field." It is difficult to see how battalions used as tactical units could have been any less effective than what resulted from the prevailing organization. The corps contained no uniform number of guns. Although most of the brigades had a single battery attached, several had two or three. This meant that Bragg's corps averaged two guns per one thousand effectives, whereas Breckinridge's "corps" had five guns per one thousand effectives.

Bragg, who had been an artillery officer in the regular army for nineteen years, was not consulted concerning the arrangement or assignment of the guns, nor was he satisfied with the organization. He later complained that, just before the battle, all the batteries would be placed under the nominal control of the corps commanders—an impossible responsibility. Yet, even if Bragg had been given input, it is not likely that he would have made any substantive changes. When he later rose to command of the army, he rigidly clung to the brigade-battery structure.

Another problem was command. Assigned to each corps was a tutorial chief of artillery: Captain Smith Bankhead for Polk's corps, Major James Hallonquist for Bragg's, and Major Francis Shoup for Hardee's. Shoup was senior, but he readily admitted that his authority in no way approached that of an army chief of artillery. Nor were the specific battlefield functions of the chiefs well defined. Shoup spent the morning at Shiloh performing the menial task of rounding up captured cannon. Bankhead even opted to relinquish his staff position so that he might personally command his own battery.[8]

Ordnance supplies remained low. Captain Felix Robertson's Florida Battery left Pensacola with four 12-pounder Napoleon guns, one caisson, and 231 rounds of ammunition. At Montgomery, the battery received a traveling forge. Once in Corinth, Robertson continued to barrage the ordnance officer with requests for items "absolutely necessary for the full equippage of this company." So poorly equipped was the Vaiden Light Artillery that it was unable to participate in the upcoming battle.[9]

The battle plan called for the artillery to be scattered throughout the army with their respective brigades. Batteries were ordered to be placed in column, section front, in the rear of brigade intervals. The prebattle instructions to chiefs of artillery to mass their batteries twelve guns on a point proved too open ended to produce sufficient results. The brigade-battery structure simply did not lend itself to the massing of guns. The morning assault at Shiloh would be characterized chiefly by batteries operating individually on their own. The attack order stated that rifle cannon should fire mainly on the reserves and second line of the enemy and only occasionally be directed on his artillery. Yet, the doctrine of the day stated that artillery on the offensive should concentrate on the enemy's cannon, not his infantry.[10]

Two batteries, the Vaiden Light Artillery and Lieutenant W. W. Carnes's Tennessee Battery, were assigned to remain in the Corinth garrison. Carnes was chagrined to learn the news. His seventy-five cannoneers were too few to man the company's six guns. Long after the army was out of sight, Carnes pondered a way to join the action. He received permission from an ordnance officer to turn in two of his cannon. Thus reduced to four guns and, in his own mind, having resolved the manpower shortage, he hastened with his battery to the battlefield. He arrived just in time to see his comrades plodding slowly back to Corinth.[11]

The march to Pittsburg Landing proved chaotic. Rain began to fall heavily on the afternoon of April 4 and continued throughout the next morning. The infantry began to deploy that morning, but more delays occurred. The artillery was partially to blame—Polk's and Breckinridge's batteries had bogged down in the mud and blocked the roads. The attack was postponed until early the next morning.[12]

April 6 dawned sunny and clear. As early as three in the morning, the horses in some of the batteries had already been hitched. At six thirty the long-

awaited attack began. Yankee patrols had sounded the alarm, but the drowsy bluecoats were totally unprepared for battle. On the Confederate right, the six guns of the Warren Light Artillery and the four of Captain William L. Harper's Jefferson (Mississippi) Flying Artillery hurriedly unlimbered in support. On the left, Brigadier General Pat Cleburne ordered Captain John Trigg, commanding an Arkansas battery, to "wake him up with a few shells." The first round cut off a treetop and sent it crashing to the ground. The battery continued firing, but most of the rounds went wild. Major Shoup conceded that "it was random work, under excitement, and the execution was not much."[13]

The victorious Rebels swept away portions of the Federal line. The rugged terrain made it extremely difficult for the batteries to maintain pace. "It was not a good place for a fight," complained a Louisiana artilleryman. "There were very few open and cleared spaces, the land being hilly and covered densely with trees and undergrowth." Gage's Alabama Battery was forced to cut its way through "thickly wooded country over ravines and hills almost impassable to ordinary wagons." The result was that many batteries became separated from their brigades almost from the beginning.[14]

On the left, R. G. Shaver's and A. H. Gladden's brigades stormed through the thickets east of the Pittsburg-Corinth Road and struck the terrified troops of General Benjamin Prentiss. The six guns of Swett's Warren Light Artillery and the four guns of Captain William L. Harper's Jefferson Flying Artillery hurriedly unlimbered in support. The ten guns caused the bluecoats to flee in confusion, but not before several of the cannoneers fell wounded.[15]

The only significant concentration of artillery during the morning attack came about seven thirty. Major Shoup's battalion of three four-gun Arkansas batteries, Bankhead's Tennessee Battery, and the Louisiana Washington Artillery, totaling twenty-four guns, deployed on a crest near Shiloh Branch to the west of the Pittsburg-Corinth Road and began lobbing shells into the Federal camps. These pieces later attempted to knock out Samuel Barrett's Battery B, First Illinois Light Artillery, at Shiloh Church. Tactically, the situation was ideal, but the inexperienced gunners fired too high, and the effect proved minimal, beyond making a direct hit on a caisson.[16]

As Benjamin Prentiss's Federal division streamed northward, Brigadier General Stephen A. Hulbert's division attempted to patch the line in a peach

orchard west of the Hamburg-Savannah Road. Even before his troops established position, Rebel artillery opened fire. One of these outfits was Captain Felix H. Robertson's Florida battery. A Texan by birth, he was destined to become a significant and controversial figure in the western artillery. His gunners trained their four Leeds & Company 12-pounder Napoleon guns on the forming Union line. A shell struck a caisson in the Thirteenth Ohio Battery, causing a huge explosion. The panic-stricken Yankee gunners abandoned all six pieces without firing a shot.[17]

Several Rebel batteries attempted Napoleonic tactics during the morning assault, with predictable results. At nine o'clock Captain Marshall T. Polk's Tennessee Battery unlimbered in Rea Field, to the east of the main Corinth Road. A gun crew was ordered to move in close and blast away. It had barely been positioned before several men fell killed or wounded and all the horses disabled; the gun had to be abandoned. Captain Polk's infantry support now gave way in confusion, leaving the company exposed. "At this time it was reported to me that Captain Polk had his leg broken, more than half his battery was disabled, and but one gun was being discharged," observed a colonel. A cannoneer single-handedly discharged the sole remaining piece three times with double canister. The battery was wrecked, losing 24 of 102 men, 30 of 81 horses, 2 guns, and all 6 caissons. Young Polk was taken prisoner and later had to have his leg amputated.[18]

About eleven thirty Captain Isadore Girardey's Georgia Battery, operating on the Confederate right, came under stiff resistance. The Georgians maneuvered to within a hundred yards and began blasting out tins of canister, but Yankee sharpshooters soon zeroed in, felling several men. The captain admitted that his losses would have been higher but for a timely assault by the Second Texas.[19]

About noon, the Union divisions of William T. Sherman and John McClernand launched a counterattack against the Confederate left. Captain Robert Cobb's Kentucky Battery galloped forward and unlimbered in northern Wolff Field. It got caught in the melee and was cut to pieces. Although overrun, the battery was later rescued when the Federals withdrew. Before the bloodletting was over, thirty-seven artillerymen and seventy-eight horses had been killed or wounded. Cobb later retired his wrecked battery with mules.[20]

At twelve thirty, the Washington Artillery dropped trail across the road

from where Cobb's men had just been mauled. Within minutes, snipers dropped eleven men and a number of horses. "Here for the first time we were placed face to face with them and for the first time found out the danger of sharpshooters, who were not more than 200 yards off behind the trees, aiming deliberately at us," lamented one of the New Orleans gunners. Soon the fight became "too hot for us," he confessed, and the battery retired.[21]

The lackadaisical direction given the artillery was sorely felt as the battle progressed. Brigadier generals, preoccupied with infantry operations, left the artillery to fend for itself. By noon, the Federal army had been swept back to a second defensive position, with twenty-three guns being captured in the process. The Confederates now had eleven batteries (about fifty-eight guns) employed on the left, not counting Polk's and Cobb's companies. Yet, Rebel batteries continued to be employed in piecemeal fashion or, in some cases, sat idly by.

Several vicious battery duels occurred as the battle progressed. For fifteen minutes, Captain Thomas Stanford's company engaged a Federal battery at a range of six hundred yards. Shells came crashing in among the Mississippians and killed or wounded four men and several horses. "Before we could fire a gun a shell blew up one of our ammunition chests; another cut off the splinter bar of the third detachment; another almost cut our wheel rider (Bowen) in two. He was killed instantly. William Jones had his right arm shot off," wrote one of Stanford's men. The Union guns were finally silenced, but, admitted a Mississippi gunner, "it was a hot time for a little while." Captain William Harper's Mississippi Battery engaged some Yankee guns a scant four hundred yards away. So close were the shiny bronze pieces that they could be distinctly seen glistening in the sun. "We had some advantage of the ground, the curve of the surface being nearer us, while ours [shells] might fall directly among them. I attributed our miraculous escape either to the circumstances or the habitual high shooting of the enemy, for their missiles passed, with a perfect range, over us at from 5 to 20 feet high," Harper reported.[22]

Grant held a commanding edge in rifled guns, but their added range was largely neutralized in the thickly wooded terrain, which limited visibility. Still, in a one-on-one duel at a range of more than one thousand yards, a smoothbore battery was at a distinct disadvantage with piercingly accurate

rifled cannon. Over by Duncan Field, Captain Melancthon Smith's Mississippi Battery became engaged in a lopsided duel with Emil Munich's Minnesota Light Artillery. Before Smith's men could even unlimber, several horses were struck to the ground by shell fragments. "Trees one and two feet through were falling among us and shells bursting among us. We had two horses killed and several wounded, and eight men wounded," Ed Goelet wrote his mother. "One man of my detachment that was standing in two feet of me had his leg shot off near the foot and the other one wounded by the same one." Smith's men toughed it out for an hour before withdrawing. Lieutenant James C. Thrall's section of Hubbard's Arkansas Battery did not last nearly that long when it exchanged blows with a Parrott battery. After firing three or four rounds, Thrall pulled his smoothbores back and admitted that "it was a little more than I felt disposed to contend with."[23]

By late morning, the focal point of the battle had shifted to the Confederate right center. Here, along an old sunken trail bordering Duncan Field, some eleven thousand Federals made a stand. For several hours, Major General Bragg, directing operations in that sector, butted his brigades in near-suicidal frontal attacks against the position, dubbed the "Hornet's Nest." He received urgent calls for artillery support, but all went unanswered. Time and lives would have been saved had Bragg immediately enfiladed the enemy's flanks with artillery. Captain Edward Byrne, commanding a Kentucky Battery, asked for permission to do such, but was angrily rebuffed for coming in person with the request rather than sending a lower-grade officer! The major general refused to hear Byrne and said that he would send an officer to receive his request. Permission was eventually received, but precious time was lost in the pedantic exchange.[24]

By mid-afternoon, it had become evident to Brigadier General Daniel Ruggles, commanding a division in Bragg's corps, that the Hornet's Nest could not be reduced by infantry alone. About three thirty Ruggles summoned his staff officers and ordered them to bring forward all the guns they could find. Stanford's and Byrne's batteries and a section of Ketchum's Alabama Battery were already in the vicinity. Within the next hour, an additional seven batteries came on line.[25]

Two separate concentrations developed. On the left, Ketchum's section was on the main Corinth Road when other batteries began assembling. Captain Smith Bankhead wrote: "As I [Bankhead's battery] went into action

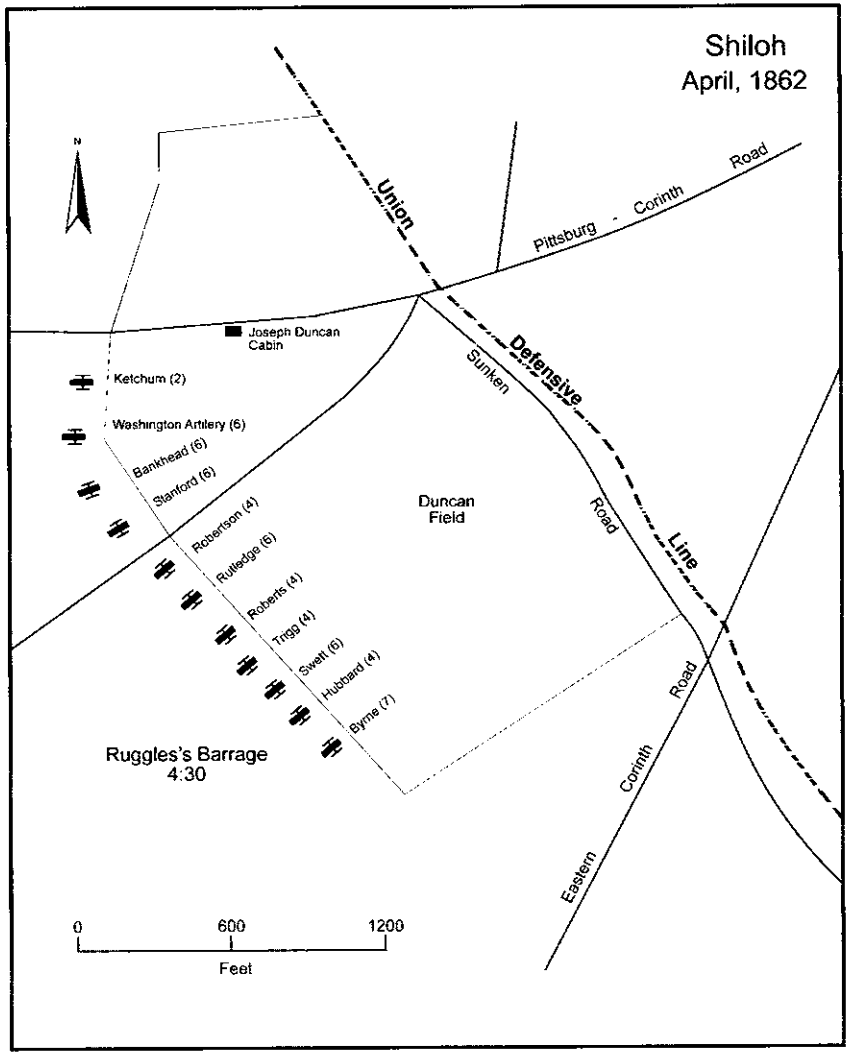
Captain Stanford formed on my right. I found the [Louisiana] Washington Artillery already in position on my left and firing rapidly. Captain Robertson's 12-pounder [Napoleon] battery formed on the right of Stanford, with Captain Rutledge on his right." Bankhead was aware of another group of batteries farther to the right, but he did not know who was commanding.[26]

The commander was in fact Major Shoup, who for some time had been massing guns in a nearby skirt of woods. Lieutenant James Thrall, leading a section of Hubbard's battery, wrote: "Captain Burns' [Byrne's] battery formed on my right, Captain Swett's battery, and Captain Trigg's and Roberts' [Arkansas] batteries formed on my left." When all was in readiness, these batteries advanced and deployed simultaneously.[27]

Not until four thirty did Bankhead's and Shoup's artillery groups become consecutively engaged. Some fifty-three guns were assembled, mostly 6-pounders and 12-pounder howitzers. The range was five hundred yards across an open field, ideal for the short-range howitzers. A Confederate officer gloated that "no one who observed the effects of that firing could but be agreeably surprised at its results."[28]

The Confederate artillery did not come out unscathed. When a Yankee battery zeroed in on Robertson's position, one of his men was literally blown apart by a Parrott shell. The situation became so critical that Robertson ordered a retreat, but so many horses had been disabled that two guns had to be temporarily abandoned. As Swett's battery unlimbered, Captain Charles Swett "noticed that one of our batteries [Robertson's] was very badly injured," with one of Robertson's men shouting: "For God's sake hurry!"[29]

The barrage at its height probably did not last but twenty minutes. An Iowa colonel referred to it as a "tremendous barrage, the heaviest I ever heard." The fire was clearly sufficient to cause the Union batteries to withdraw, but the Hornet's Nest was by that time being rapidly flanked by infantry, and its demise appeared certain. At five thirty the remaining twenty-two hundred Federals surrendered. The tactical effect of the cannonade has probably been exaggerated. The captain of the Washington Artillery failed to even mention the incident in his report nor, curiously, did the letters and diaries of seven artillery men whose batteries participated. Major Shoup recalled that "the fire opened beautifully but almost immediately the bluecoats . . . began to break to the rear, and we soon saw white flags." Shoup



did not believe that the barrage played a significant role in the fall of the Hornet's Nest. Though momentarily spectacular, the barrage did not significantly alter the outcome of the first day's battle. That potential had existed, but it had simply taken too long to collect the scattered batteries.[30]

The incident (on paper) did not even come to light until nearly a year later. Ruggles filed an amended report, which included several affidavits in-

cluded at his request. These reports, which glorified Ruggles as "the controlling genius on that occasion," came at a sagging time in his career. In postwar years, Major Shoup wrote: "By the way, I find in the *War Records* that General Ruggles claims the credit of making this concentration of artillery. I remember that he was there at the time, but I thought he was a spectator, and I was really under the impression that I conceived and executed it myself." Immediately after the battle, an artillery officer, Lieutenant E. C. Williams, wrote that at two o'clock in the afternoon Brigadier General James Trudeau, an artillery officer recently arrived from Island No. 10 and serving as an aide on Beauregard's staff, began collecting guns in response to an order from the Creole. Captain Swett later recalled that he received his orders from Hardee. It would appear that there was no "controlling genius" on this occasion but that several officers played a role.[31]

At the collapse of the Hornet's Nest, Major Shoup moved his composite battery group of some twenty-odd guns down the main road leading to Pittsburg Landing. Only three-quarters of a mile from the river, he encountered General Breckinridge, who was forming two lines of infantry for a final push. Federal flags could plainly be seen five hundred yards down the road. Shoup ordered a barrage to "shake them up." After replenishing their caissons from nearby stacks of captured ammunition, the gunners laid down a furious cannonade. A nearby New Orleans journalist noted that the earth shook and that a sulphurous odor filled the air. At six o'clock, as the supply of shells dwindled, Shoup sent a message to Breckinridge: "If you are going to charge, now is your time." As the infantry moved past the row of cannon, a courier suddenly galloped up. Beauregard, who had succeeded the mortally wounded Johnston, had issued orders to break off the attack and retire to safety.[32]

The attack probably would not have succeeded. Throughout the afternoon, Grant's chief of staff, Colonel J. D. Webster, had been massing guns just above the river landing. Some forty-one of them stood poised along a one-mile semicircular perimeter. At five thirty Bragg ordered James Chalmers's and John K. Jackson's brigades across Dill Creek with orders to "drive them into the river." Encountering a murderous fire, the Confederates quickly withdrew. Gage's Alabama Battery supported the assault from a prominent ridge, but came under gunboat fire. One shell "killed three [horses] at one pop—all but the driver's horse," noted one of the Mobile gunners. The bat-

tery lost one man wounded and seven horses disabled and abandoned one gun on the slope of Dill Creek before withdrawing.[33]

At dusk, Captain Thomas Stanford attempted a daring feat. He cautiously moved his Mississippi battery down a hill near the river and prepared to shell the Federal gunboats anchored in the Tennessee River. Even though the naval fire proved more demoralizing than deadly, it was more than he was willing to take on. Because it was now dusk, he feared the sailors would spot the flash of his guns and obtain the range. The battery withdrew quietly.[34]

A cold rain on the night of April 6 added to the misery. Although fatigued, largely unorganized, and thoroughly soaked, the Southerners were confident of finishing off Grant's army the next day. But, even then, the decisive factor of the battle was taking place. During the night, portions of Don Carlos Buell's Army of the Ohio (twenty thousand strong) arrived, as did Lew Wallace's belated division from Crump's Landing. Preparations were even then being made for a counterattack. At dawn the tables would be turned.

At daylight on April 7, Colonel Preston Pond discovered too late that the main Confederate line on the left had been pulled back the previous night. His brigade was thus exposed and alone as Lew Wallace's fresh division rolled forward. Faced with a perilous situation, Pond withdrew his troops and left Bill Ketchum's battery to cover the retreat. Although the company sustained losses both in men and in horses and one gun was abandoned that got stuck in the mud, the later rumor that "Capt. Ketchum is killed, and all his men either killed or captured" proved to be false. After being engaged in several positions, the battery withdrew intact. Pond later credited the battery with saving the brigade.[35]

The scene would be repeated many times during the day as the gray artillery served as a plug in a crumbling dike. The near-sacrificial rearguard actions of some batteries may well have prevented a general retreat from degenerating into a rout. By ten o'clock in the morning the Secessionists on the left had formed a ragtag line south of Jones Field, backed by Ketchum's, Smith's, and Girardey's batteries. The last engaged two Federal batteries and were quickly silenced. Byrne's battery, some eight hundred yards to the right, fired obliquely in an effort to assist the Georgia cannoneers, but only

succeeded in knocking down large overhead limbs that killed several Rebel infantrymen.[36]

At eleven o'clock the Louisiana Washington Artillery, posted on the edge of a cotton field on the Purdy-Hamburg Road, lost its infantry support and was suddenly confronted by several Federal regiments. The New Orleans gunners, backed by two pieces of McClung's battery, braced for the assault. They poured sixty rounds into the enemy, but failed to blunt the tidal wave. Three of Captain Hodgson's six guns were overrun, and vicious hand-to-hand fighting ensued. "The balls were falling around us like hail, and before we could get ready three horses at my piece and the same number at two others were killed, our sergeant was killed and Lieut. Slocomb wounded, and we had to run leaving these three pieces on the field," noted a member. The enemy came up to and even passed them almost routing the Crescent regiment, which receiving heavy reinforcements rallied and drove the enemy back. Timely reinforcements saved the battery from annihilation, but not before eight gunners were killed or wounded and twenty horses disabled. For the want of animals, three caissons, a wagon, and a traveling forge had to be abandoned.[37]

To the west, on the eastern Corinth Road, Captain William Harper's Mississippi Battery barely escaped. The company was down to sixty-two men, leaving only six (rather than eight) men in each of the four gun crews. When the Federals closed to within fifty yards, they let loose a volley that dropped five horses. One cannon had to be abandoned, but miraculously no casualties were suffered.[38]

Over by Duncan Field, Captain Edward Byrne's battery also had its hands full. Since late morning it had been dueling with a Federal battery (G, First Ohio). Posted on a ridge, the guns recoiled and went reeling down the slope. By early afternoon the men were exhausted, and fully a third of them were out of action. Only by receiving infantry reinforcements did the battery remain in service.[39]

Matters grew steadily worse. The Southerners were simply caught off guard by the sheer weight of the Union onslaught. In the early afternoon, the Confederate line by Review Field began to crumble. The hasty retreat left Stanford's battery, in the eastern portion of the field, virtually alone to contest the advance. The gunners nervously stood by their pieces until the

Federals were barely three hundred yards away and then unleashed volcanic volleys of canister. "Large gaps were made by every gun at each discharge," Stanford noted. "Three regimental flags being in full view, I gave the order to point at them, and soon had the satisfaction of seeing two of them to the ground, both being raised again. One was again cut down."[40]

One of Stanford's men described the panic. "The enemy came upon us like an avalanche," declared John Magee. "We stood firm, pouring the canister into them until they got within 75 yards and then the captain gave the order to limber up. Most of the horses were killed, and those living were so badly tangled it was impossible to get them in order under the heavy fire of minié balls coming in around us." The cost proved high; Stanford lost twenty men, four guns, and all six caissons. Although the battery had been virtually destroyed, precious time had been bought for the infantry to form a second line.[41]

At two o'clock, the Federals advanced across Review Field, capturing three guns of an unidentified Rebel battery, probably Smith's Mississippi, set up along the Purdy-Hamburg Road. Not far from that position, in the northwest corner of Jacob Barnes's field, two more guns were lost from an unidentified battery.[42]

Unable to stop the relentless Union drive, Beauregard at two thirty ordered a general retreat. As a patchwork line formed south of Shiloh Church, Bragg called up Ketchum's battery to delay the Federal advance. Giles B. Cook, an aide to the general, noted: "General Bragg placed Ketchum in position on a hill [to the] left and rear of the church. . . . The battery remained on that hill about an hour." Meanwhile, about two thousand infantry and fifteen cannon assembled on an elevated ridge south of the church. The army then began an orderly retreat. Frantic efforts were made to carry away as many of the captured guns as possible, a task complicated by the shortage of horses. Captain Melancthon Smith left behind three of his own guns in lieu of three better Union James rifles.[43]

The rear of Beauregard's army passed the row of cannon at four o'clock. Major Shoup suddenly realized that the artillery was now totally alone on the field. "I looked to the rear and there was not an infantryman or cavalryman in sight," he wrote. Prolonges, ropes with hooks attached between the gun carriage trails and the limbers, were rigged so that the guns might be re-

moved while still firing. They were alternately pulled back in this fashion. Shoup recalled that "we were very much absorbed in a movement we never before had had a chance to practice on the field."[44]

While the batteries slowly retired, Shoup rode ahead and searched for the column. A harrowing moment occurred when he came to a fork in the road but found no guide to give directions. The major galloped down the most promising road but, after riding some distance, found no infantry at all. A sudden panic came over him. "There I was, abandoned by my army and at the mercy of the enemy, with all those guns!" He quickly doubled back, took the other road, and eventually found the column. His artillery was saved.[45]

Bad roads, which quickly turned to quagmires, and a shortage of artillery horses nearly led to disaster. At seven thirty in the morning on April 8, Bragg informed Beauregard: "Our artillery is being left all along the roads by its officers; indeed I find but few officers with their men." By two in the afternoon the situation had further deteriorated. At that time Bragg informed Beauregard: "The roads are horrible and unless we can mend them it is impossible for the artillery to get in." By that time extreme measures were being taken, including the dismounting of two hundred cavalry troopers and using their mounts to haul the guns. Byrne's battery did not reach Corinth until April 10. Had the Federal pursuit been strong, the Confederates would clearly have lost much of their artillery.[46]

The fierceness of the fighting at Shiloh was reflected in the casualties; Beauregard lost a fourth of his army. For all practical purposes, Cobb's, Stanford's, and Polk's batteries were wiped out, and several others suffered nearly as much. The Louisiana Washington Artillery lost twenty-six men and thirty horses, Bankhead twenty men and thirty-seven horses, Robertson nineteen men and twenty-three horses, and Smith fourteen men and twenty-three horses. Among the sixteen casualties of Hudson's Mississippi Battery was the captain, Alfred Hudson, who was killed. Overall artillery casualties totaled about three hundred, or 15 percent. The Southerners captured thirty-three guns on the first day's attack, but many of these were retaken on the seventh. They also lost a number of their own guns on that day. Beauregard came out probably four guns ahead, if that many.[47]

Shiloh taught two lessons regarding the artillery—one tactical and the other organizational. Warfare was undergoing a transition. Artillery used on the tactical offensive was limited in effectiveness. Ruggles's barrage not-

withstanding, the real hero of the first day's battle was the blue artillery, which operated in a defensive mode. The determined stands made by batteries at Shiloh Church, the Hornet's Nest, and Grant's last line likely prevented the Federal army from being overrun. Guns operating on the offensive had to be utilized in mass for effectiveness. Ruggles's barrage was the largest concentrated use of artillery on the North American continent up to that time. Yet, this principle seems to have been lost in future battles. Shiloh also demonstrated the inability of the brigade-battery organization to deliver massed fire rapidly. As long as batteries were scattered throughout the army, their full potential would never be realized. The antiquated structure was nonetheless retained.

4
"Enough of Kentucky"

Beauregard's shattered army fell back to Corinth, where it recuperated and prepared for the expected advance of the combined Union force, now under Major General Henry Halleck, that totaled 108,000 troops. Even with the addition of Earl Van Dorn's twenty-thousand-man Army of the West, recently arrived from Arkansas, the Confederates still barely numbered fifty-one thousand. Polk's, Hardee's, and Bragg's corps deployed in a three-mile semicircle north of town, with Van Dorn's on the east flank and Breckinridge's in reserve.

The makeup of the artillery changed considerably. Polk's Tennessee Battery was disbanded, twenty-three of the men transferring to Carnes's battery. Rutledge's battery merged with McClung's, and Byrnes's went with Cobb's. Robertson's company received forty transfers from Ducatel's discontinued battery. The balance of Ducatel's men went to the Washington Artillery, as did a dozen infantrymen from the Orleans Guards Response Battalion. The Vaiden Light Artillery was assigned to man siege guns. Gage's Alabama Battery transferred back to Mobile, as did the Pettus Artillery to Vicksburg and Hubbard's Arkansas Battery to the trans-Mississippi. Several accessions offset these losses. Waters's and Lumsden's batteries came up from Mobile. The Orleans Guard Artillery, Eldridge's, Baxter's, and Baker's Tennessee batteries, and Watson's Louisiana Battery—all of which had been on detached duty—arrived and were given assignments. By May 26, Beauregard counted twenty-one batteries, but they included only 916 men.[1]

Van Dorn's "army" had an impressive array of guns, seventy in all, but his artillery was poorly organized and badly supplied. A cadre of batteries from the old Missouri State Guard served as the backbone. The most his-

toric of these was that of thirty-six-year-old Captain Hiram Bledsoe, comprised of farmers, boatmen, and merchants. Thirty-eight-year-old Captain Henry S. Guibor of St. Louis, a Mexican War veteran, commanded a battery comprised of Irishmen, Germans, Scots, Englishmen, Italians, and a freed black. The thirteen Missouri batteries were consolidated into ten so that every company would have at least seventy privates, but, in fact, all remained badly undermanned. In May 1862 Guibor counted only forty-three men and Bledsoe fifty-three. The order reducing all batteries to four guns was stubbornly resisted as late as early summer.[2]

In addition to his Missouri artillery, Van Dorn brought a Texas and two Arkansas batteries. Provence's Arkansas, raked by desertion, was soon reorganized under Captain John T. Humphreys. The Texas company, commanded by thirty-five-year-old former attorney Captain John J. Good, was actually a militia outfit that dated back to 1859 and had been organized as the "Dallas Light Artillery." The state presented the original thirty-five members with two field howitzers, and Good drilled them from a manual.[3]

Several batteries used the brief respite to reorganize and elect new officers. In some, such as Swett's, the men reaffirmed their leadership. This vote of confidence was lacking in the Washington Artillery. A private stated that the men were disgusted with the performance of Captain Irving W. Hodgson, especially since giving a fatally slow order to limber up in the late battle, and "that very few in the company would be willing to go into another engagement with [Lieutenant Charles] Slocomb." Sergeant Joseph T. Skillman claimed that Hodgson had "done the company great injustice in it. He has rendered himself very unpopular. In fact he has not been popular since we left N.O." When Hodgson left due to illness, the men refused to accept him back, and he resigned, whereupon Slocomb became captain.[4]

At least one election turned out to be rigged. In Sanford's battery, Sergeant W. H. Brown received a three-fourths vote to fill a vacancy for second lieutenant. Because of bad blood between Brown and Captain Thomas Stanford, however, the officers reversed the decision and commissioned another man. The truth came out (a lieutenant resigned over the sham), but the results were never challenged. Captain Charles Lumsden became sick, temporarily leaving his Alabama Battery under the inefficient Lieutenant Edward Tarrant.[5]

Captain William H. Jackson received a promotion to colonel of the cav-

alry. Major General Polk attempted to give the battery to Captain Orton Williams, a former aide on his staff. When Jackson heard the news he exploded. "Not such a captain as I know Orton Williams to be, and General, with no disrespect to you, I now say [pulling out his new commission] rather than see any such arrangement made, I will burn my commission in that fire, and resume command of the battery myself!" Polk backed down and gave the company and a captain's commission to William W. Carnes.[6]

Beauregard revamped his organizational guidelines for the artillery. All six-gun batteries were reduced to four. Any excess lieutenants went to other batteries until the next battle, when they would replace casualties. Uniformity of calibers was established within each battery—either four rifles or four smoothbores. Hudson's company, for example, became a howitzer battery, that "being the choice of our officers," according to a member. Hodgson balked when he heard that the Washington Artillery would have its howitzer section removed and become a rifled battery, arguing that his men excelled in close-in work. The standard of six horses per gun was maintained, and, in cases of deficiencies, cavalry troopers would be dismounted and their horses turned over to the artillery.[7]

As the men settled into the routine of camp life, sickness again set in, causing the hospital list to soar. Private Joseph Garey of Hudson's battery jotted in his diary on April 11 that a "goodly number of the company have taken sick from the exposure & fatigue of the late marches & battle." Measles raked the men of Lumsden's battery, prostrating fifty, five of whom died. By May 18, eighty-two men in the company were in various hospitals, leaving only forty-two in camp—"just barely enough to man the pieces," remarked a member. The Washington Artillery had ten stricken with diarrhea, and many others had respiratory ailments from exposure.[8]

A slight action occurred on May 9 at Farmington, a small village northeast of Corinth, when a reconnaissance-in-force, undertaken by Van Dorn's corps and Ruggles's division, bumped into a division-size complement of Yankees on a similar mission. Ruggles deployed the Washington Artillery, the Orleans Guard Artillery, and Hoxton's Tennessee Battery, but the last came under fire from sharpshooters in the woods two hundred yards distant before they even unlimbered, wounding one man and disabling four horses. The gray gunners soon caused the Union infantry to fall back and take cover, their commander admitting that "we suffered considerably from their fire."

Lieutenant Billy Vaught of the Washington Artillery boasted of two shots—one that struck the head of a lead wagon horse a mile away and another that burst directly in the face of an annoying sharpshooter.[9]

On May 12 Lumsden's battery became engaged in a sharp encounter with a Yankee battery, supported by infantry. "There were several very narrow escapes," admitted Private Searcy. "Wooly had the top of his hat shot off. Bozeman a very nice young fellow from Autauga Co. [County] . . . had a stirrup shot into pieces and the side of his horse wounded. He was one of the drivers. Post had his coat tail shot through and his skin slightly grazed. Another man was shot through his pants. Three of the horses were wounded. So you can see we had quite a time," he wrote his mother.[10]

Much of the time at Corinth was spent on isolated outpost duty. John Pugh's gun No. 2 of the Washington Artillery went out five times between the Battle of Shiloh and May 16, each time staying from two to seven days. "It is sometimes dangerous duty and frequently one of a great deal of suspense and anxiety when an attack is expected," he wrote his wife, although admitting that outpost duty usually came to nothing. Still, the men remained "cheerful, and we are all determined upon a great victory."[11]

A Stanford battery member likewise jotted in his diary under the heading of May 26–27: "Our battery was ordered out on picket. Previous to this time, our battery was in position at the breastworks, and we had to keep a guard of six men at all times. Alarms were constant. The enemy would often bring up a heavy battery and fire a few shots at us. They threw several shells among us—one of which knocked me down and stunned me considerably."[12]

By the end of May, the Rebels determined that they could not hold Corinth. By June 9, the army had slipped back to Tupelo ("The Yankees are shelling furiously our 'dummies' [fake cannon] we left in position at Corinth," said an amused Mississippi cannoneer) and established a new line. The resupply of men and horses continued. Between May and July, forty-five men departed the Washington Artillery, a third due to disabilities, but the company received a like number, mostly infantry transfers. The company, at one point down to 25 horses, and some of those captured at Shiloh, received a new shipment of animals, bringing the number of horses back up to 106. The fresh horses were mostly white, causing the Yankees to dub the outfit the "White Horse Battery."[13]

The situation in Lumsden's battery likewise improved. Two new replacement guns arrived, as well as fresh horses, bringing the complement to eighty-four horses and thirteen mules. The muster roll increased to a hundred, and, in fact, the company "has improved in most every way," noticed James Searcy, remarking that "the horses get full rations here now, besides grazing every day." Daily drill occurred in a wheat field about a half mile from camp.[14]

Shortly after arriving in Tupelo, Beauregard was removed from command by the Richmond government and replaced by Bragg. "Genl. Bragg is strict in enforcing discipline throughout the army now," noted Private Searcy. "There was an inspection last Monday of all the artillery in this division, and our battery had the praise of the best kept horses—and equal to any in the drill. They made no criticism while we were going through the drill at the piece." A member of Stanford's battery noted: "General Bragg is trying to get the army under strict discipline—he is not liked much by the boys on account of having several men shot being absent without leave and desertion."[15]

The various division artillery chiefs consulted and selected an extensive field where all the batteries of the army could be camped together, with the guns parked on the east, the horses in the rear, and the men's quarters farther back. The men drilled daily, and there was frequent competition between batteries. This time represented the first period of extensive training since the previous fall. Around mid-June, an inspection and review was held of all the artillery. Major General Hardee called Captain William Carnes front and center of all the batteries. "Captain Carnes, I am pleased to say to you, that the decision of the judges is that you have the best equipped and best handled battery on the field today." The young captain removed his cap and modestly replied, "I thank you, sir."[16]

A June 30 inspection of the Washington Artillery reflected problems found in several of the batteries. Reported the inspector:

> The six pieces of artillery I found in good order and condition, with implements etc. complete. The caissons were also in perfect working order and condition, with the exception of one which had the tongue broken, it was then being repaired at the Company

forge—the requisite implements were in their places. The wheels and running gear of guns and caissons and the harness belonging to them were in very good condition.

Each gun was supplied with the proper amount of ammunition which I found to be in perfect order, and securely kept. The Battery wagon, forge, and tool chest, were all in good order, and well supplied. The horses were not in perfect condition. Many looked thin and unable to endure hard service. Five were reported to be as unserviceable. The Camp & grounds were clean and well kept. . . . I was greatly pleased throughout the inspection.[17]

Bragg soon decided to move the army to Chattanooga to join Kirby Smith's twenty-thousand-man Army of East Tennessee. The combined force would then march to defeat Buell's Army of the Ohio in middle Tennessee and invade Kentucky. Van Dorn's army and Breckinridge's division, along with some exchanged Fort Donelson prisoners, several newly recruited regiments, and the former New Orleans garrison would remain in Mississippi to confront Grant, now commanding in that sector. It was a bold plan, marred only by the news that Smith would retain independent command.

The logistical complexities involved in such a move were enormous. An immense amount of artillery ordnance remained in storage at the Grenada depot, including thirty-eight fieldpieces, mostly "old style" iron 6-pounders and 12-pounder howitzers, fifty-four limbers, eleven gun carriages, twenty-five caissons, and three traveling forges. Bragg's Prussian-born chief of ordnance, Colonel Hypolite Oladowski, issued two hundred rounds to each fieldpiece before leaving Tupelo, and fifty rounds per gun were forwarded to the new depot at Dalton, Georgia. Ordnance authorities in Richmond were advised that "some gun carriages, implements and harness it will be necessary in a very few months to replace by new."[18]

Bragg's army left Tupelo on July 23 en route for Chattanooga. The infantry went a circuitous 776-mile trek by rail via Mobile and Atlanta, while the artillery took the ordinary roads through Columbus, Mississippi; Tuscaloosa, Alabama; and Rome, Georgia. The journey was fraught with difficulties almost from the start. On the second day out, the horses in Carnes's battery balked at crossing a creek and held up the entire battalion. By July 25 the exhausted horses were giving out. The cannon and caissons went to Ar-

tesia and were loaded on railroad cars to go by way of Mobile, while the horses and drivers, along with their cavalry escort, continued on by road. Numerous poor bridges were encountered. A horse and driver in Stanford's battery fell completely through a rotten trestle. At Wilsonville, Alabama, animals and men plunged into the Coosa River, there being no bridge.[19] Discipline occasionally broke down. In Aberdeen, Private John Magee, of Stanford's battery, wrote that "there was some lewd women in town—some of the boys were about them all night." In another town, he noted that "many of them [officers] got drunk and behaved very badly," and in Talladega several artillerymen "got tight and wanted to fight." An altercation between a soldier in the Washington Artillery and one in the Jefferson Artillery led to the latter's death. Good fun was also experienced. At a girls' school in Blue Mountain, Alabama, the student body was entertained by "firing a blank shot from Smith's battery." Captain J. W. Eldridge made a speech, and the officers danced with the ladies to the tune of a fiddle.[20]

As the guns and caissons passed by rail through Georgia, Lieutenant William Vaught of the Washington Artillery noted that everywhere the ladies pelted them "with fruit & flowers, candy & notes, cheering us on." He added: "After leaving Atlanta our engine broke down, & a train behind us ran into us, breaking up two or three cars, knocking all our guns out of their places, but hurting no one seriously. I was asleep on a platform in between two guns, but never awoke, till I was called up. That's the way I sleep nowadays."[21]

The column usually made from fifteen to thirty miles a day. The men arrived at Rome, Georgia, on August 13–15, where the guns, carriages, and men were loaded on railcars for the final leg into Chattanooga. The drivers and horses continued overland. Each train carried only two batteries because the ordnance was so heavy. The train carrying the Washington Artillery was bumped in the rear at night by another train, jarring the guns but injuring no one. The column required twenty-four days to complete the 432-mile journey. Unfortunately, the cannoneers of Lumsden's battery who accompanied the guns and caissons on the railroad cars dawdled for eight days in their hometown of Montgomery.[22]

Additional artillery joined along the way. Semple's Alabama Battery from Tuscaloosa met the column at Blue Mountain. Private Magee described them as "gay boys—some of them right good musicians. Played several

tunes on fiddle and a banjo." Captain Henry Semple expressed frustration over the laxness. "You have no idea of the trouble and vexations of a march when 110 horses have to be watched and 128 men who become as children as soon as they get in the army," he wrote his wife.[23]

Captain Joseph E. Palmer's Georgia Battery, also known as the States Rights Battery, also joined the column. Along with the other three companies of the newly organized Fourteenth Georgia Artillery Battalion, this battery had been assigned to a camp of instruction at Calhoun, Georgia. Several officers arrived from Chattanooga to select the best-drilled unit to accompany Bragg's army. All four companies went through various maneuvers, and Palmer's crack outfit emerged as the winner.[24]

Cheatham's division artillery arrived in Chattanooga on August 16. Two days later, "Leigh," a gunner in Stanford's battery, wrote a letter for the *Appeal* describing their journey:

> In the course of twenty-four hours we have traveled 430 miles. Our horses held out much better than we expected, as we lost but few on the road. Though the heat and dust were often intense and oppressive, and the journey toilsome, yet the boys have had fine health and high spirits, and the health of "Stanford's battery" is better than it has been since its members bid adieu. . . .
>
> At every house along the road where our approach had been heralded, flocks of old folks, children and maidens were assembled to wonder and admire, and the inevitable question to those in front was—"Mister, how far is the artillery behind?"
>
> But let me not forget to mention the invariable kindness and hospitality of the good citizens along the way. We had plenty of fruit, milk, honey, vegetables, chickens, etc. At nearly every place where we camped, we were visited by the citizens, and especially the ladies. The boys were frequently invited to dinner or supper, and in one or two instances a public dinner was given to all the soldiers present.[25]

Once in Chattanooga, the army halted for a brief rest. The Augusta Washington Artillery, depleted by detachments to other batteries, had its four officers and remaining cannoneers detached for garrison duty. The Pettus Flying Artillery reported in good condition—200 rounds for each of the

6-pounders and 156 for each howitzer. Captain Darden counted seventy-eight horses and thirteen mules, all in good condition, although his men needed clothing. On August 16, Magee scrawled: "In camp—artificer fixing up gun carriages—some washed clothes. Got our bread baked by a lady—about 11 o'clock the horses came in. We then hitched up and changed our camp only a few hundred yards. Boys all well and in good spirits." Likewise in Lumsden's battery, James Searcy reported that "all the Tuscaloosa boys are well. Captain Lumsden had [a] spell of sickness on the way, but is now well again."[26]

Before departing Chattanooga, Bragg reorganized his army into two wings under Hardee and Polk, each comprised of two divisions. The army commander made no changes in the artillery structure and retained the brigade-battery organization. The fifteen batteries comprised about sixty-six guns, with no artillery assigned to the cavalry brigades. Bragg's former corps artillery chief, Major James H. Hallonquist, was promoted to lieutenant colonel and appointed as army chief of artillery.

While Bragg waited for his artillery to move up, Kirby Smith's army, reinforced with two of Bragg's brigades under Cleburne, marched into Kentucky. On August 30 it captured a Federal division at Richmond and then marched to Lexington, where it remained in control of central Kentucky throughout September. Because Smith was determined to act independently, Bragg altered his original plan. He would now bypass the Northerners in middle Tennessee and keep his army between Buell's and Smith's. Once in Kentucky, the two Confederate armies would unite.

On August 28, Bragg's troops crossed the Tennessee River and began the march north. The journey over the rugged Cumberland Plateau proved arduous for the artillery. Crossing the southern slope of Walden's Ridge turned out to be a major project. Ten horses were attached to each gun, and numbers of infantry assisted in helping tow the pieces up the steep grade. Getting down proved almost as difficult. "In going down the mountain the caisson of our detachment turned over and rolled down the mountain side some distance and lodged among some trees. The riders and horses of course went down with them. Prentiss Shumate was caught under the wheel horse, crying for help, it being dark as Egypt. We soon struck a few lights and with the assistance of Jake Ransom, Ab Ely and others, Shumate was extricated from his awful position," George Jones related.[27]

As the Federals followed Bragg's army into Kentucky, they abandoned their garrisons in northern Alabama. On August 29, three Rebel infantry regiments, a small cavalry contingent, Captain Samuel L. Freeman's Tennessee Battery, and a section of Georgia artillery approached Stevenson. Having gained a commanding view of the town, the artillery opened fire at one in the afternoon, soon silencing the enemy's guns. The bluecoats evacuated the town, with an Alabamian noting: "Captain Freeman won the plaudits of all by the skillful manner in which he handled his battery."[28]

By September 13, Bragg's divisions had arrived at Glasgow, Kentucky, and Buell's army, moving to intercept, was at Bowling Green. After capturing five thousand Federals and ten guns at Munfordville on the seventeenth, Bragg swerved eastward to link up with Smith. On September 29, "Leigh" of Stanford's battery wrote from Bardstown: "We have been in camp now for several days, and will probably remain here for sometime yet. I understand that the intention is to provide the army with winter clothing, a thing which we are sadly in need of at present." In early October, Buell, reinforced by a third corps of new conscripts, launched a counteroffensive from Louisville, catching the Confederates badly scattered. The Army of the Ohio drew up at Perryville against Hardee's corps and Cheatham's division of Polk's corps, pitting fifty-eight thousand against sixteen thousand. Unaware of the overwhelming force in their front, the Southerners took up a "defensive-offensive" position on the steep eastern edge of Chaplin's Creek, a stream (barely two feet deep due to a severe drought) west of Perryville.[29]

Throughout the morning of October 8, 1862, St. John Liddell's brigade, supported by Swett's battery, was driven back by a heavy force of Federals west of Perryville. Shifts were made so that Cheatham's division held the right, Buckner's the center, and Anderson's the left. About noon, Brigadier General S. A. M. Wood, whose brigade formed the right of Hardee's corps, spotted Yankee artillery in the woods across Doctor's Creek. He sent an urgent message to hurry up the artillery. Carnes's Tennessee Battery happened to be nearby because one of its teams had become tangled in a farm gatepost and was immediately ordered to occupy the gap that existed between Cheatham's division and Hardee's corps. The twenty-two-year-old Carnes wheeled his Memphis outfit into position on the edge of some heavy timber, fronted by an open valley. Peering through his field glasses, he quickly spot-

ted a Federal battery. At noon the order came to commence firing. "Our attack brought a fearful response from across those fields, for within a few minutes we were under the fire of four six-gun batteries at different points opposite," Carnes reported. "All seemed to be using rifled guns, as, though the distance was extreme for us, none of their shells fell short, but fortunately for us, most of them went high overhead, cutting off tree limbs that fell on us."[30]

Darden's Jefferson (Mississippi) Flying Artillery now entered the fight (on what is today known as Cheatham's Hill), and Lumsden's battery deployed to their right. Stanford's rifled battery soon replaced Carnes's smoothbores. Federal artillery zeroed in on it before the guns could even be unlimbered. "The Yankees had perfect range on us," declared one of the men. "Had one of our ammunition chests to explode. Pitt McCall and Charles Boycroft killed and several wounded before we could fire a gun." Another member described the fray: "Soon the shrill report of our 6-pounder rifled pieces responded to the heavier boom of the enemy's guns. Each battery was in plain view of the other on the opposite hills one mile distant. . . . We do not know for certain how much damage we did the enemy, but Major Bankhead, who conversed with the Federal chief of Artillery after the capture of the battery, says that we succeeded in exploding a caisson, killing a number of men and horses, besides doing considerable damage with other shots. After we had fired from forty to sixty rounds to the gun, we ceased firing for our guns to cool."[31]

For the next hour and a half, the twelve Rebel guns dueled with a like number of Federal pieces at ranges of one thousand yards (Darden) up to sixteen hundred yards (Stanford). "The music of twelve Yankee guns and their whistling shells is not the most pleasant I have heard," one of Lumsden's men related to his mother. "For two hours, we carried on this duel half a mile distant perhaps. I consider it almost miraculous, that [we] came out alive. . . . They dismounted one of our guns, killed three of our horses and wounded two of our men seriously." The two Federal batteries (the First Michigan and the Fifth Indiana) also received damage in the punishing exchange, the caisson hit by Stanford being in the Fifth Indiana. The matchup, occurring in generally rolling terrain (good artillery country), would be one of the most even to occur in the west. No winner emerged; it was mutual destruction.[32]

At one thirty the duel ceased. Half an hour later, Cheatham's division rose onto the steep bluffs across the creek and attacked the raw troops of James Jackson's division. Daniel Donelson's and George Maney's Rebel brigades were lacerated by Yankee artillery fire. Although it appeared as though the attack would fall apart, Cheatham's troops pushed forward, overrunning an advanced Federal battery (Parson's) and routing William Terrill's brigade. The Union line fell back nearly two miles before the attacked was checked.

Major Melancthon Smith, hearing Cheatham's artillery, moved Turner's Mississippi Battery from the river bottom at Walker's Bend to the woods atop the bluff. Cheatham ordered the battery to the extreme right to a hill overlooking the enemy. The guns unlimbered and opened with an enfilading fire of canister and spherical case at a range of 250–300 yards. A young cannoneer heard a voice shout: "Let me have my hand at them." Looking up, he saw Major General Cheatham. The youth stood aside while the division commander "fired several rounds, pointing the gun and directing the fire apparently with as much pleasure as a boy shooting at rabbits."[33]

Hardee, meanwhile, concentrated his attack against the Federal center, where the enemy line crossed the Mackville Pike. The Secessionists had to advance in full view of Federal artillery on the ridge west of the creek. Tom Jones's brigade was shattered and forced back. As Bushrod Johnson's brigade reached Doctor's Creek, the scene became one of confusion due to the oblique wheel it was ordered to make. The Washington Artillery accidentally fired into two of Johnson's Tennessee regiments. Compounding the error, Southern infantry fifteen minutes later fired into the New Orleans battery![34]

After severe fighting, Buckner's division pushed the Federals up the Mackville Pike and past the Henry Bottom House, where a second defensive line formed on a slope. There Union artillery attempted to stem the tide. Pat Cleburne's brigade, supporting Wood's regiments, smashed McCook's right, however, and sent the Yankees streaming back to open ground astride the pike, near the intersection of Benton Road. In Buckner's second line, John Brown's three-regiment brigade advanced past the Widow Bottom House, supported by Captain Joseph Palmer's "Southern Rights Battery" in its combat debut. Palmer's Georgians soon encountered a precipice that brought them to a halt. One section backtracked and eventually unlimbered east of

the house. "I had one killed and one of my cannoneers wounded before I could unlimber, but when I got in battery I gave them hell with canister," Palmer related to a friend. For an hour and fifteen minutes (three thirty to a quarter of five) the cannoneers stubbornly held their ground, losing eight of seventeen men and twelve of eighteen horses.[35]

Now the Confederates brought up their own artillery from the creek bottom to batter the Union line. At three thirty the Washington Artillery, Darden's Mississippi Battery, and a section of Calvert's Arkansas Battery, ten guns in all, assembled near the Bottom House and opened fire. The First Michigan and Fifth Indiana Battery again came into action, and a forty-five minute duel ensued. A Minnesota battery also came into play, but was quickly forced back. A Union division commander remarked that the Rebel artillery concentration showered them with shells, as many as four or five bursting simultaneously. Sporadic firing continued until after dark.[36]

Massed Federal infantry and artillery clung to the vital junction of the Dicksville-Springfield and Perryville-Mackville roads. The brigades of Cleburne and Wood were checked as Union reinforcements arrived near the Springfield Pike. Night ended the fighting.

Artillery casualties at Perryville were extremely light, especially in proportion to those in the infantry. Cheatham's division, for example, suffered a staggering 1,451 casualties, but the three attached batteries counted only 11. Apparently the heaviest artillery loss came when a detachment of twelve men and two caissons from the Washington Artillery, sent to the rear for ammunition and water, stumbled into a Federal regiment on the Danville-Mackville Road and was captured. That night, Major Smith ordered Lieutenant William Turner to send his teams to the hill where Parson's battery had been taken and haul away the abandoned ordnance. He removed five prized 12-pounder Napoleon guns (two of which he kept for his own battery), one 12-pounder howitzer, one rifled gun, two limbers, and two caissons.[37]

Early on the morning of October 9, Bragg, now thoroughly alert to his precarious situation, ordered a retreat through Cumberland Gap to Tennessee. The artillery was plagued with problems all along the way. Smith's battery, armed with two captured Napoleon guns, now lacked sufficient teams to haul its own section of 6-pounders. The latter were consequently dumped in an old well. Lumsden's battery also buried several guns in an

apple orchard near Dick's Creek. At Bryantsville, the only forage wagon in Semple's battery broke down, causing the 125 horses in that company to go forty hours without corn. Morale plummeted as rations ran low and fears ran rampant that Buell would cut off the army's escape. On the night of October 16, a dispirited John Magee wrote in his diary: "The troops up all night—some cursing such times and some 'Old Bragg.' "[38]

Further complicating matters, Captain J. H. Calvert continued his old habits. He was drunk on October 9 during the march from Harrodsburg to Bryantsville. While in a stupor on the fifteenth, he struck one of his sergeants with a sword. On the seventeenth, Captain Semple reported that his Alabama Battery had been ordered to march in the rear of Darden's. Calvert replied that he "knew his place and intended to have it and that he did not give a damn about the order." When Semple threatened to report the matter to his superior, Calvert replied that he "intended to go on after Darden and [he] might refer it to whom he pleased." Calvert then began swearing and forced his teams to drive Semple's men off the road. Semple preferred charges, and the Arkansas captain was later cashiered from the army.[39]

By the end of October, Bragg's army had successfully escaped through Cumberland Gap and had arrived in Knoxville. There a dozen of Lumsden's men rejoined the company, partially offsetting the four (two wounded and two deserters) left behind. Captain Stanford took a detachment back to Grenada for winter clothing, "some of the boys being nearly naked." John Magee related on the twenty-fifth: "Weather rather winterish we have no tents, and but few flys. A great many are sick and others are getting sick. The last 2 weeks has been the hardest two I ever experienced. . . . Great dissatisfaction exists in regards to Genl. Bragg's course for the last 2 months." Perhaps it was Lieutenant Billy Vaught of the Washington Artillery who summarized the views of most: "Enough of Kentucky."[40]

5
Failed Lessons: Stones River

Even as his retreating army plodded through Cumberland Gap, Bragg envisioned an offensive in middle Tennessee. Bragg sold the idea to the Richmond government when he was summoned there in late October. Soon his four divisions boarded cars at Chattanooga for the Murfreesboro front. Several weeks later, Kirby Smith and two divisions (Carter Stevenson's and J. P. McCown's) of his Army of East Tennessee also left Knoxville for the rich valleys of middle Tennessee.

As usual, the artillery was not afforded the luxury of a train ride. Because of the overtaxed transportation system, it had to move overland. A blanket of snow covered the ground as the caravan pulled out of Knoxville. The route was via Kingston to Washington, over Walden's Ridge to Dunlap, south to Jasper, over Cumberland Mountain, and across to Tullahoma. It was a grueling 185-mile march requiring fifteen days, and the men suffered terribly. "We have the usual troubles of soldier life, and in addition have had a march of fourteen miles through a driving sleet and snow," complained an Alabama battery commander. "The snow remains after four days still, in shady places, and the weather, though milder today, has been very severe. Tents frozen in the morning so stiff as to stand without poles or ropes." On December 4, Lieutenant Turner took stock of his battery. The basic equipment remained intact (two 12-pounder howitzers, two 12-pounder Napoleons, one battery wagon, one traveling forge, one ambulance, sixty-eight horses, and twenty-five mules), but he remained dangerously short on ammunition.[1]

Major General John C. Breckinridge's five-thousand-man division, buttressed with Fort Donelson exchangees, had returned from detached duty

in Louisiana and, along Forrest's cavalry, arrived at Murfreesboro before Bragg's army. Breckinridge brought with him Cobb's battery of two 6-pounders and two 12-pounder howitzers, along with Captain J. Ingrams's Graves Kentucky Battery of Fort Donelson exchangees, with two 6-pounders and two 12-pounder howitzers, all iron pieces of poor quality. Eldridge's Tennessee Battery, also with a pair each of 6-pounders and 12-pounder howitzers, joined too, as did Captain George A. Dure's Jackson (Georgia) Artillery, later known as Massenburg's battery, with two 6-pounders and two 3-inch iron rifles.

The major artillery accession was Major J. T. Montgomery's Fourteenth Georgia Light Artillery Battalion, which had been organizing at Griffin and Calhoun since the previous spring. Company A (Palmer's) had already linked up with Bragg's army and served in the Kentucky campaign. Companies B (Ruel W. Anderson's with four 3.3-inch rifles), C (Coleman B. Ferrell's with two 6-pounders and two 12-pounder howitzers), D (E. R. King's with two 6-pounders and two 12-pounder howitzers), F (James G. Gibson's with four 6-pounders), and G (Sidney A. Moses's with two 6-pounders and two 12-pounder howitzers) arrived in November 1862. The companies would never serve together as a tactical unit, and D, F, and G (there was no E) would eventually consolidate with other batteries of the battalion.

Breckinridge noted that most of the artillerymen "are very poorly and thinly clad, and much in need of blankets." Ingram's battery and most of Montgomery's battalion had been supplied with horses, although almost all of Cobb's horses had been condemned and needed replacing. Each gun and caisson had six horses, with a surplus of ten to twelve per company as replacements. Eldridge's battery required new harness. "The companies are not so thoroughly and efficiently drilled as could be wished, from the fact that they are very short of men, the drivers and cannoneers frequently having to take each others places," Breckinridge continued. "The cannoneers of the different batteries are required to drill two and a half hours each day at the foot battery; the drivers one and half hours in harnessing and unharnessing, besides a battery drill of three hours. The officers are required to attend recitation in tactics two hours each day."[2]

Once again, Bragg faced a reorganization. He restructured his infantry into three corps under Hardee, Polk, and Smith. The cavalry was also revamped and placed under Joseph Wheeler. Bragg rechristened the force as

the "Army of Tennessee," a name it would retain for the war's duration. Its strength totaled about forty-seven thousand, including twenty-eight batteries. On the evening of December 12, President Davis, anxious over the deteriorating western situation, arrived in Murfreesboro. At Bridgeport, Alabama, where the Howe Turn Bridge had been destroyed, the president's luxury railroad car was floated on a barge across the Tennessee River and reconnected to a second waiting train, all while the Washington Artillery, which had been sent to Bridgeport for the occasion, fired a thirteen-gun salute. At sunrise on a brisk December 13, in a field a mile outside of town, Polk's corps was reviewed, the sun glistening off thousands of bayonets. Davis rode the full length of each division, finding the troops in good spirits. His visit, however, was far from social. He needed troops for Mississippi to check a threatened invasion, and they had to come from either Arkansas or Tennessee.

General Joseph E. Johnston, commanding the newly created but quite nebulous Department of the West, advocated the former, but Davis chose the latter. Thus, Stevenson's division and an attached brigade from McCown's division, together totaling 8,776 men and four batteries, departed the army. Bragg's new structure thus disintegrated. On December 12, Patton Anderson's division was broken up. The new organization gave Polk the divisions of Jones Withers and Frank Cheatham, and Hardee received those of Breckinridge, Pat Cleburne, and J. P. McCown. Kirby Smith returned to East Tennessee.[3]

McCown's division was new to the Army of Tennessee. Two of his batteries, Humphreys's Arkansas and Douglas's Texas, had served in Earl Van Dorn's Army of the West and subsequently Kirby Smith's Army of East Tennessee. Twenty-seven-year-old Captain James P. Douglas, who would later distinguish himself as an artillery field officer, had previously been a Tyler, Texas, school principal. McCown's other battery, Captain W. A. McTyre's Eufaula Light Artillery, had been organized in late February 1862. It had been in active service only seven months and had never engaged in more than minor skirmishes.[4]

Breckinridge received a new artillery chief around Christmas 1862. Major Rice Graves had been recently exchanged from his capture at Fort Donelson. Making an unannounced inspection of the Washington Artillery, he found the caissons loaded with plunder for a Christmas celebration. With

disgust, he asked Lieutenant J. Chalaron, "Is this the way the Washington Artillery travels?" The embarrassed lieutenant determined to make amends. Captain Ketchum resigned about this time, leaving the command of his battery to Lieutenant James Garrity.[5]

The hastiness with which the Murfreesboro campaign had been undertaken soon became evident. The army was simply in no condition for a second offensive. The artillery organization, hastily conceived and lacking in imagination, continued to be viewed traditionally, that is, as an extension of the infantry. A superior organization at this time would have partially offset the Southerners' inferiority in quality and quantity of guns. This did not occur, and the old brigade-battery structure was retained.

The army, thinned by desertions and sickness, underwent a severe manpower crunch. The infantry had dwindled to 27,800 troops and the artillery to 1,920. Bragg lamented that some of his regiments were down to one hundred men. The artillery suffered similarly. In late December, Cheatham's four batteries mustered only 295 men present for duty. A number of companies would fight the upcoming battle with less than seventy-five effectives.[6]

Problems were also encountered with the stock. On the surface the supply appeared adequate. In late November 1862, Withers's batteries averaged seventy-one horses and twenty-three mules apiece. In Breckinridge's batteries, ten to twelve surplus horses per company were available as replacements. The trouble was that many of the animals counted on paper were in an unserviceable condition. Disease and strenuous overuse, especially after the long overland trip from Knoxville, took an ever-increasing toll. Captain Henry Semple reported that so many of his animals were run-down that his caissons had to be drawn by two rather than three teams. "With only one blacksmith and no nails or nail rod iron from Chattanooga to Bryantsville the horses suffered greatly for shoeing which of course materially effects their appearance and condition," he reported.[7]

Bragg's armament continued to be dominated by the two staples of the Confederate western artillery: the 6-pounder and 12-pounder howitzer. These weapons accounted for probably 85 percent of his cannon. A few 12-pounder Napoleon guns were also in use. Semple's and Robertson's batteries each had six Leeds & Company Napoleons. Although the batteries were in different corps, one of Lumsden's men insisted that they could al-

ways tell when Captain Dent's (Robertson's old) battery was engaged by the distinct boom of their Napoleons. Smith's battery boasted two Yankee Napoleons captured at Perryville. Bragg counted barely a dozen long-range rifled guns.[8]

Despite the problems that persisted at all levels, a business-as-usual atmosphere prevailed at Murfreesboro. Captain Thomas Stanford became ill and went on furlough in late October, leaving thirty-three-year-old Lieutenant Hugh McSwine in command, much to the chagrin of the men. On December 1 a private complained: "Drilled on [the] field. McSwine in command. He cannot drill the company. Not fit for an officer, but we cannot help ourselves."[9]

While the Confederates settled in for the winter, the Union army in Nashville prepared for battle. Rosecrans had learned that Stevenson's division had been detached from Bragg's army and that Forrest's and Morgan's brigades were now absent on raids. The Union commander decided to move against the weakened Southern army. On the rainy and fog-shrouded morning of December 26, the blue army snaked southeast toward Murfreesboro. Rosecrans's forty-seven thousand men would engage Bragg's thirty-eight thousand. The Yankee cavalry was clearly outclassed, but the Union artillery dominated. Twenty-six batteries with about 244 guns (a 50:50 smoothbore-rifle ratio) accompanied Rosecrans's army. Bragg had twenty-four batteries, but because most possessed only four guns, he counted only 106 pieces.[10]

The Army of Tennessee was spread over a forty-mile front when the Union advance began. Bragg now frantically attempted to pull his scattered divisions together to a position some three miles northwest of Murfreesboro. To accomplish this, he needed Wheeler's cavalry to buy some time. At the first sign of an advance, a section of Captain J. H. Wiggins's Arkansas Battery of horse artillery moved north to La Vergne and soon became engaged. So skillfully was the section used that, according to a Union officer, the entire left wing of Williams Rosecrans's army came "to a stand still." Before reaching Stewart's Creek, the Federal spearhead came to a halt no less than a half-dozen times by roadblocks supported by Wiggins's guns. When the Federals halted and brought up their own artillery, the Rebel gunners would break off the engagement. For the next two days, Wiggins's can-

noneers became alternately engaged in sections in this manner, a tactic that would prove quite effective.[11]

For several days, the armies skirmished and groped around to determine each other's position. By the afternoon of December 29, Bragg perceived that the main threat was to his right wing, on the west bank of Stones River. Wayne's Hill, a crucial eminence that commanded the river fords on Breckinridge's left and also flanked Withers's right on the west bank of the river, was belatedly occupied by several regiments of Roger Hanson's brigade and Cobb's Kentucky Battery. Cobb soon came under fire from guns "of much longer range than mine." About seven in the evening the enemy, in brigade strength, forded Stones River and attempted to storm the hill. The advancing bluecoats delivered a heavy musket fire at short range. "Fortunately, the cannoneers were ordered to the down and thus escaped without injury, save one detachment which, not hearing the order, remained standing and were all either killed or wounded," Major Graves explained. Confederate infantry reinforcements rushed forward and saved the battery, which withdrew under cover of darkness.[12]

Early on the thirtieth, Cobb return to Wayne's Hill, reinforced with a rifled section each from the Washington Artillery and Lumsden's battery, both commanded by Lieutenant A. C. Gibson, a Breckinridge staff officer. At seven in the morning, as the Kentucky gunners began throwing up earthworks, they came under fire from two enemy batteries across the river at ranges of twelve hundred and seven hundred yards. As the fire slackened, Gibson, heretofore with his guns on the reverse slope of the hill, received orders to come atop and unlimber to the right of Cobb. Being a staff officer and not an artilleryman, the lieutenant collapsed under the pressure and turned command over to Lieutenant J. A. Chalaron. Lumsden's section went into Cobb's works, but the New Orleans section unlimbered "on the highest point of the crest" and became engaged.[13]

When the friction primers of the Washington Artillery continually failed to ignite, Lieutenant Chalaron exclaimed to Major Graves, "See, Major, what damned stuff is given us to fight with." The young major raised his hand in rebuke and said, "Lieutenant, don't swear." Corporal David W. Smith made a fine shot on an ammunition wagon crossing on the opposite bank, hitting it squarely on the second shot. At one point, Major Graves ducked at the

sound of an incoming shell, embarrassingly explaining to Chalaron, "Lieutenant, it is stronger than me."[14]

Robertson's Florida Battery, positioned on the west side of the river on the Triune Road west of the Smith house, encountered the heaviest action of the day. At four in the afternoon, Robertson opened a cannonade on enemy skirmishers in his front. The Second Minnesota and Eighth Wisconsin batteries quickly responded. One of Robertson's caissons was struck. The Twenty-first Illinois made a dash for the guns, but was repulsed with canister and the support fire of the gray infantry. "They threw shot and shell at our battery for about an hour and a half; the whole atmosphere was a perfect uproar. I never was in such a terrific bombardment before and I hope I shall never experience the like again. Our regiment occupied the brow of the hill just in the rear of our battery. It appeared to me that if we had been standing up the last of us would have been killed. A caisson belonging to the left section was struck by a bomb and blew up; several men were killed and others badly mangled & wounded," wrote Ninth Texas member John K. Street. Fourteen cannoneers fell killed or wounded. Lieutenant W. A. McDuffie's Eufaula Light Artillery came up in support and succeeded in disabling a gun of the Eighth Wisconsin Battery.[15]

A section of Stanford's battery, under the direction of Lieutenant A. A. Hardin, was sent to the Confederate left, where he found Robertson heavily engaged. "Here we remained a few minutes for orders while the shells were exploding among us every minute," related "Leigh." "There was scarcely a tree to be seen which was not shattered by these terrible missiles." The section unlimbered in a cornfield to Robertson's left and soon came under fire from a Yankee battery on a hill seven hundred yards to the right. For some reason ("I fear no good one," admitted Leigh), as soon as the section came into play, Robertson's and McDuffie's batteries withdrew. Twelve Federal cannon thus zeroed in on the hapless section—"at least a dozen shells passed within ten feet of my head," Leigh noted. Incredibly, only two men fell wounded during the half hour pounding, but, in withdrawing, Lieutenant Hardin was killed.[16]

By the night of the thirtieth, circumstances had arisen that convinced Bragg that the real threat was not to his right flank but to his left. He therefore devised a plan that called for Breckinridge's division to hold the high ground east of the river, while the rest of Hardee's corps (McCown's and

Cleburne's divisions) massed to the left of Polk's corps (Withers's and Cheatham's divisions) west of the river. At daylight on the thirty-first, McCown would attack, supported by Cleburne. The Southern infantry would wheel to the right, causing the Federal right wing to jackknife into the angle between the Nashville Pike and Stones River.

Once again, the Confederate artillery faced an offensive battle over unfavorable terrain. Furthermore, its role, other than offering general support to the infantry, was never established. The only prebattle directive issued to the chiefs of artillery instructed them to "pay special attention to posting of batteries and supervise their work, seeing they do not carelessly waste ammunition." It seems clear that Bragg did not see the long arm as having a distinctive role. For example, the Confederate attack was to be made by the left flank, yet a third of the artillery remained on the right flank, east of Stones River. By noon of December 31, many of these batteries would be scrambling to cross the river to support the assault.[17]

At least the high command planned for one contingency. An officer from Carnes's battery was assigned a detachment and several teams of mules for the purpose of removing captured guns and caissons to the rear at once to avoid recapture in the event of a reversal.[18]

A cold drizzle continued on the morning of December 31. At six o'clock Hardee's veterans smashed into the divisions of Richard Johnson and Jefferson C. Davis of Alexander McCook's corps. Many of the Northerners were eating breakfast, and some of the artillery horses were being watered far to the rear. Johnson's division was routed, with eight guns falling into Rebel hands. The victorious Southerners swept uncontrollably past the Franklin Pike. By nine o'clock McCook had been forced back to a new line along the Wilkinson Pike.[19]

The rugged terrain, coupled with the rapid movement of the infantry, made it extremely difficult for the batteries to maintain pace. As Douglas's Texas Battery rumbled forward, one of its caissons struck a log and broke down. Several horses also became entangled and ripped their harnesses. As the Southern infantry swept forward, Hardee's batteries began to stack up along the Wilkinson Pike, unable to follow in the dense cedar break and limestone outcroppings.[20]

When Humphreys's battery galloped north toward the Wilkinson Pike,

it entered a gap created on McCown's right flank. An estimated sixteen Union guns suddenly erupted at a range of five hundred yards. Shells burst around the Arkansas gunners, "tearing down the trees like the whirlwind and scattering them like lightning." Two of Humphreys's guns were disabled, and eight men and five horses fell. The wrecked battery quickly retired to the rear. Sheer carelessness on the part of the Rebels created additional havoc. The Eufaula Light Artillery had not been issued sufficient ammunition before the attack, keeping it out of service until early afternoon. Two of Humphreys's guns became useless, due to an issuance of oversized ammunition. Two pieces of Swett's battery also became disabled, one when a friction primer broke off in the vent and another when a case shot got jammed in the bore.[21]

A mistake was also made in not properly supporting John Wharton's cavalry brigade with artillery. The Rebel troopers had swung around and were creating havoc on the Federal right. The troopers spotted a wagon train of several hundred vehicles on the Nashville Pike. Wharton placed his only artillery, Captain B. F. White's Tennessee Battery, in position to support a cavalry charge. At the same time, he sent an urgent appeal for artillery; none came. As the troopers overran the wagon train and vigorously pursued the retreating bluecoats, some three hundred enemy cavalry had maneuvered around to Wharton's rear and sighted White's now isolated battery. The gunners repulsed a charge, but it was a close call. Not until late afternoon were any additional batteries dispatched to the far left.[22]

The attack was now taken up by Cheatham's and Withers's divisions of Polk's corps. Phil Sheridan's division put up stiff resistance and inflicted severe casualties. A staff officer approached Lieutenant William B. Turner and requested that he silence a troublesome battery (C, First Illinois) raking George Maney's brigade. Turner advanced to a brick kiln west of the Harding house and opened with an effective fire in which he expended two hundred rounds in forty minutes. The sergeant setting the fuses at one gun had been a preacher and carefully laid his cheek along the vent of the gun as he took aim. One shot made a direct hit on a gun and set a limber chest ablaze. "Parson, give 'em hell, God damn 'em!" Turner shouted. At best, however, Polk's artillery fire was limited and uncoordinated. Scott's and Robertson's batteries never even advanced, and Carnes's and Barret's batteries were only minimally engaged. Waters's Alabama Battery "met a great

deal of trouble from the great number of friction primers that were worthless."[23]

Only one brief instance of effective coordinated artillery fire occurred during the morning attack. Timothy Stanley's Union brigade came under a "converging fire that was most destructive" from two batteries on his right, probably the Jefferson Flying Artillery and Humphreys's Arkansas Battery south of the Wilkinson Pike, and from one battery on his left, probably Stanford's east of McFadden Lane. Yankee eyewitnesses testified that scores of men went down.[24]

By ten o'clock the Confederate drive had begun to lose momentum. The Federal line now bent back at a right angle at a four-acre eminence on both sides of the railroad north of the Nashville Pike known as the "Round Forrest." Here Rosecrans concentrated five brigades and supported them heavily with artillery. Reminiscent of his performance at the Hornet's Nest at Shiloh, Bragg now attempted to storm the position with near-suicidal infantry assaults. Massed infantry and artillery fire hurled back brigade after brigade.

As with the infantry, Bragg committed his artillery in piecemeal fashion. Stanford's battery advanced to the Cowan house and immediately came under a withering fire. It was "the most terrible cannonade I ever witnessed," wrote a Mississippi gunner. Within minutes four men and several horses had been put out of action and a limber chest blown to splinters. "Leigh" of Stanford's battery "was gunner of one of our pieces and had fired but once when a cannon ball killed two men at my gun. The head of one was shot off within a foot of mine, and his brains splattered in my face." The battery quickly pulled back. A section of Lumsden's battery unlimbered on a hill near the Cowan house and fired fifty rounds before withdrawing. Bragg later wrote that he ordered up "our heaviest batteries and artillery and rifled guns" to batter the Round Forrest but to no avail. In reality, nothing like a coordinated artillery effort was ever made. Indeed, when Carnes's battery began firing to cover the withdrawal of a retreating brigade, Bragg dispatched an aide to "report the name of the battery firing without orders."[25]

The scenario actually provided an excellent opportunity for the artillery. The vertex of the Union angle presented a compact target subject to crossfire. One option was simply to commit simultaneously the guns of Polk's

corps north of the Cowan house, which would form an obtuse angle, with Hardee's artillery running northwest to southeast. The Union position was also subject to an enfilade fire from Breckinridge's rifled guns across the river in the Wayne's Hill vicinity. Bragg neglected these opportunities and continued to misuse artillery.

Failing to break the back of the Federal salient with either infantry or artillery, Bragg now called on Breckinridge to send reinforcements from the east side of the river. Throughout the afternoon, these brigades engaged in repeated isolated assaults against the Round Forrest. Daniel Adams's and John Jackson's brigades advanced, only to be repulsed. Breckinridge ordered an aide to "find some artillery." He rounded up the Washington Artillery and Byrne's battery, but they groped around for orders on arrival. Bryne was finally told to "take the best position he could find." The two uncommitted sections of the Washington Artillery and a section of Semple's battery, a total of six Napoleon guns, took a position on a hill to the left of the Nashville Pike. The fire of these guns offered shelter for Adams's fleeing Louisianians and checked the pursuit of a Federal battery galloping down the pike. William Preston's and J. B. Palmer's brigades were now decimated. During the attack, Preston's battery, Wright's Tennessee, remained in park on Franklin Road.[26]

During the early afternoon, Hardee's weary troops launched three attacks against the Nashville Pike, where McCook's shattered divisions covered a mile-and-a-half stretch. Once again, the southern artillery was haphazardly used. Brigadier General Bushrod Johnson frankly wrote: "It was unfortunate that our artillery was not properly moved forward to support us. . . . I do not think that our artillery was sufficiently used on the left. General Liddell's battery [Swett's] arrived on the ground and he proceeded to put it into position for the work to be done, but he did not succeed in time before the retreat commenced."[27]

On the few occasions when batteries came up, they engaged one at a time, making easy pickings for massed Union guns. Lieutenant Thomas Key's Helena Light Artillery galloped forward and unlimbered, only to be pulverized by a murderous artillery fire. "Their rifle guns could throw canister as far as ours could spherical case, and in order to prevent annihilation, we were forced to withdraw," wrote Key.[28]

Throughout the night of the thirty-first and New Year's Day, the armies

glared ominously at one another as the commanders contemplated their next move. Some maneuvering occurred. Rosecrans abandoned the Round Forrest to shorten his line, and Polk quickly moved up into the position. More notably, the Federals crossed to the east bank of Stones River in division strength and occupied a strategic hill that overlooked McFadden's Ford.

During the early morning hours of January 2, the Confederates at last did what they should have done on the early afternoon of December 31. Some twenty-two guns were massed north of the Cowan house in a line stretching for a quarter of a mile. The batteries of Stanford, Carnes, and Turner unlimbered north of the railroad, and Scott's battery positioned itself in an open field between the railroad and the Nashville Pike. Robertson's six-gun company rested to the left of Scott in front of the Cowan house. At nine o'clock the gunners unleashed a furious barrage up the pike and railroad, startling the Yankee redlegs and causing one of their officers to declare, "They had our range perfectly." Three Union batteries withdrew after a thunderous twenty-minute duel. Perhaps the most significant aspect of the whole affair was that it demonstrated what could have been accomplished all along by massing artillery. If the Rebel artillery dominated the morning fight, however, the afternoon would belong to the Federals.[29]

Bragg now became increasing alarmed about the Federal division on the east bank, Polk's corps being exposed to an enfilade artillery fire. Shortly after noon, Bragg informed Major General Breckinridge that his division must attack the heights in his front. The latter argued that Union artillery dominated the high ground west of McFadden's Ford and that his infantry would be hit by cannon fire as they advanced. Unyielding, Bragg ordered the attack scheduled for four o'clock.

The artillery would play a vital role. To distract the Federals and soften up their line, Polk's guns on the west bank were to open a fifteen-minute preparatory barrage beginning at a quarter of four. In direct support of the infantry, Breckinridge would have Anderson's and Wright's batteries and four guns of the Washington Artillery. As a further supplement, Bragg ordered from Wayne's Hill four guns from Semple's battery and from across the river all six pieces of Robertson's battery, all ten pieces to be commanded by Robertson. In the Wayne's Hill vicinity, Cobb's battery and a section of Lumsden's battery could deliver an enfilade fire from across the river.

Byrne's battery would serve as a reserve. The cavalry, also to participate in the attack, was supported by White's battery. Bragg thus committed some fifty-three guns, half of his artillery, to this venture. Twenty-six of the cannon would be directly involved in the attack. Robertson agreed to follow, occupying the hill at McFadden's Ford as soon as it came into Breckinridge's possession.[30]

Problems arose almost from the beginning, not the least of which related to the role of the long arm. At the very hour of the assault, Breckinridge and Robertson apparently began feuding over the exact role of the artillery. According to Robertson, Breckinridge understood that the attack would be made by a combination of both arms, the batteries being positioned between two lines of infantry. Robertson refused and maintained that his instructions from army headquarters were "to wait until the infantry had crowned the crest, and then to rush up and occupy it." He further argued that Breckinridge's arrangement would crowd the field and that, in the event of a reversal, every gun might be lost. "General Breckinridge, thinking differently, however, formed his batteries and advanced them simultaneously with his infantry and immediately behind it," wrote the captain.[31]

Because of subsequent events, Robertson has been soundly criticized by modern writers, who describe him as an overly ambitious Bragg crony who was not beyond lying. One secondhand report claimed that Robertson later admitted that he falsely ordered his report at the request of Bragg. Inasmuch as the disagreement was not mentioned in Robertson's original report but only in a second report prepared some days later at Bragg's request, one author has even questioned whether the incident actually occurred. The objections raised by Robertson, however, whether at the time or after the fact, were valid ones. Breckinridge gambled heavily by calling for a combination attack.[32]

Two facts can be clearly established about the artillery's part in the assault. First, Breckinridge's batteries did advance with the infantry, while Robertson's ad hoc battery group remained in the rear. Second, Robertson was given explicit orders that, once the crest had been gained, Semple's four guns would be placed on the right of the division, while Robertson's own six would protect the left flank from anticipated artillery fire from across the river.[33]

Even before the attack began, Bragg's massive artillery support began

to dwindle. Byrne's battery exhausted its ammunition in preliminary, and unnecessary, skirmishing. Because of poor coordination, the cavalry and White's battery never received orders to attack, thus effectively eliminating seven guns before the assault even began. At a quarter of four Polk was to begin his barrage. He did not learn of the order until three thirty, however, and therefore had only fifteen minutes to prepare. The smoothbores began firing on time, but lacked the range to do damage.[34]

At four o'clock a cannon, probably from Anderson's battery, boomed a single shot: the signal for the advance. Two long lines of infantry, some fifty-three hundred troops, grimly moved forward in front of Wright's, Anderson's, and Vaught's batteries. Barely half the distance had been covered when Breckinridge noticed that the cavalry was not advancing, causing his right to be badly overlapped. He necessarily halted his advance until Major Graves could bring up a battery to cover that sector.[35]

Captain Eldridge Wright's Tennessee Battery moved forward at a gallop. As it cleared an open wooded area and moved into a large cornfield, a minié ball struck the lead horse in one of the 6-pounder teams, causing it to tumble to the ground. Before the drivers could stop the team, the carriage crashed into the dead animal, snapped the pole, and placed the piece out of commission. Wright's men managed to unlimber their other three guns and soon became engaged in a fifteen-minute duel with a Federal battery a scant three hundred yards distant.[36]

Searching for additional artillery, Graves spotted an uncommitted battery three hundred yards in the rear of Wright's position. He rode over and found Semple's four-gun detachment under Lieutenant E. J. Fitzpatrick. The lieutenant claimed he had received no orders from Captain Robertson concerning his role in the attack. Graves ordered the battery forward, and the Alabamians soon became engaged alongside Wright's Tennesseans.[37]

Meanwhile, Breckinridge's infantry, in a driving sleet, reached the heights and overpowered the Federals. Going out of control, his troops swarmed over the crest, down the slope, and into the river bottom at McFadden's Ford. As they eagerly pursued the Federals, however, their tightly packed ranks came within the range of massed Union guns on the high ground west of Stones River. These fifty-seven guns (thirty-nine of them hub to hub), directed by Major John Mendenhall, suddenly blasted out a wall of flame, causing the Rebels to stagger and then reel back. It proved to be the most

decisive and stupefying use of artillery in the western theater during the war. The massed fired decimated Breckinridge's ranks, first staggering, then routing the division. "From a rapid advance they broke into a rapid retreat," observed a Union officer.[38]

For the time being, the gray artillery could do little to respond. Wright's and Semple's batteries were committed on the right, and Vaught's and Anderson's batteries were in motion. Cobb's battery was on Wayne's Hill, on the far left rear of the division, but his smoothbores lacked the range to strike the Union artillery. The rifle section of Lumsden's battery moved to an open field near the river in front of Wayne's Hill and fired four rounds. This drew heavy fire on Cobb, however, and the section ceased fire. For some fifteen minutes, the Northern artillery, virtually unopposed, pounded the Secessionists.[39]

Graves now frantically attempted to establish his batteries on the crest to open a counterfire. From left to right, Vaught's Anderson's, Semple's, and Wright's batteries unlimbered their pieces. They did manage to disable one Union gun, but little else went their way. They were not only clearly outgunned but also outpositioned, the Union guns being on a higher elevation. One of Semple's gunners estimated that they lost an average of one man every two minutes. It now became imperative that Robertson's battery come forward on the left and attempt to neutralize the guns in the area of the Round Forrest. But Robertson could not be found. A staff officer vainly searched the field for him. Graves later reported that he did not see Robertson during the entire engagement. Mistakenly thinking that the left side of the hill had been cleared of the enemy, Robertson took it upon himself to "alter the plan." He never moved his guns beyond the woods. This was probably for the best. The additional artillery would have been of little use; indeed, Breckinridge admitted as much.[40]

As Breckinridge's men streamed back in disorder up the slope and past the artillery, the Federals, sensing that the momentum had shifted, reformed and launched a counterattack. "Feeling that this was one of the cases it being necessary to sacrifice one arm of the service for the safety of another, I resolved to maintain the artillery in its position," Graves commented. It was a gallant decision—probably a correct one—but it would prove to be costly.[41]

A blistering fire poured into Graves's artillerymen. Captain Wright fell

mortally wounded, and Major Graves was struck twice, the last time turning command over to Lieutenant Chalaron. The detachment of Semple's battery was nearly wiped out; twenty of forty-five men were lost in thirty minutes. In addition, one of their Napoleon guns was captured. The Washington Artillery quickly exhausted its ammunition, the caissons having been wrongly ordered away. While waiting for additional rounds, a detachment was sent to man one of Anderson's pieces, whose men were lying on the ground to avoid the deadly fire. Wright's gunners fired double charges of canister, but the blue onslaught could not be stopped. "It was only when the enemy was within pistol shot and all our artillery ammunition was exhausted that the order to limber to the rear was given," Graves noted. The Louisiana gunners removed their pieces only when the onrushing bluecoats were within fifty yards. Five men and eight horses were lost in the melee. As the men limbered up, Graves foolishly reversed himself and ordered the crews back into position. After firing only one volley, he again ordered a "Limber to the rear!" At this time, the Federals swept up the slope, overrunning two of Wright's guns and killing or wounding fourteen men and ten horses.[42]

Captain Robertson, who had sat out the assault, did at least take steps to cover the retreat. He positioned his battery in front of the woods where the assault began and was soon joined by the Washington Artillery. Other gun crews stopped as they withdrew, but all of them were out of ammunition and were ordered to continue to the rear. "So soon as our guns were unmasked, fire was opened on the enemy's line and continued until dark, with a very heavy fire of skirmishers upon the artillery," Robertson stated. He reported a loss of six men and a like number of horses and admitted that some of his men would have fled had he not leveled his revolver at them. "I am clearly of the opinion that if there had been no artillery on that field the enemy would have gone into Murfreesboro that evening," he continued. "There was no organization that I could see or hear of until after the enemy had been checked, save in the artillery." This statement may have been an exaggeration. As night approached, the attack was sputtering out on its own, and Federal reports never mentioned an artillery line. Still, the long arm did represent organized resistance in an otherwise chaotic situation.[43]

It can perhaps be argued that Breckinridge's attack was doomed from the start. Any hope for success involved coordinated artillery support, which

clearly failed to occur. No single hand directed operations. This rightly should have been the responsibility of the army chief of artillery, Lieutenant Colonel Hallonquist, but evidence is lacking that he played any role in the episode. As a result, only half of the thirty-seven guns available on the east bank became significantly engaged.

Major Graves also found it impossible to control so many scattered guns on line. After the battle, Lieutenant John Mebane, now commanding Wright's battery, wrote, "Had our battery gone to the rear when the other batteries of the division did, we would have saved our guns; but being under the immediate supervision of the [division] chief of artillery, we did not move without orders from him."[44]

During the night of January 3–4, Bragg ordered a retreat. Polk's corps marched to Shelbyville, and Hardee's went to Wartrace. The casualties in the artillery had been light, especially considering that Bragg lost a third of his army. Twenty-five men were killed, 148 were wounded, and 9 were missing, a total of 182. Batteries incurring heavy casualties included Robertson's (twenty men and fifteen horses), Semple's (twenty men and fourteen horses), Wright's (fourteen men and ten horses), Stanford's (ten men and seven horses), and Vaught's (nine men and eight horses). Three guns had been captured, and several were disabled. A full twelve inches of the muzzles of one of Swett's guns had been blown off. The blue long arm came out decidedly second best, however; it lost 374 men, a staggering 688 horses, 30 guns, 21 caissons, 4 battery wagons, and 6 traveling forges.[45]

At Stones River, the Confederates had once again tried but failed to use their artillery on the tactical offensive. The terrain was simply too difficult and the maneuvers of the batteries too uncoordinated to be effective. "Our artillery could rarely be used," Bragg admitted, "while the enemy, holding defensive lines, had selected formidable positions for his batteries and this dense cover for his infantry, from both of which he had to be dislodged by our infantry alone." One historian concluded that the Southern artillery "accomplished little."[46]

Much of it, for all practical purposes, sat out the first day's battle. Several batteries, such as Scott's Tennessee, literally did not fire a shot, and others were only minimally engaged. When Mebane's battery reported to Hardee, it was "ordered to park in the field about a half mile west of Stones River," where it sat out the battle. Marshall's battery expended only a few rounds,

and those were "by order of General Breckinridge, to assist in studying our own troops, though not having a very fair shot at the enemy."[47]

As for the Union army, the case seems clear: its powerful artillery tipped the scales. After the war, Union general Thomas Crittenden evaluated: "Before this battle I had been inclined to underrate the importance of artillery in our war, but I never knew that arm to render such important service as at this point."[48]

6
"All Hands Fixing Up the Battery"

During the early days of January 1863, Bragg committed his weary army to a defensive line along the Duck River in south central Tennessee. Polk's corps wintered at Shelbyville and Hardee's at Wartrace, with army headquarters at Tullahoma. In early April, in an effort to obtain more pastureland and forage, Polk's batteries, supported by Manigault's brigade, traveled four miles from Shelbyville out to the Lewisburg Pike. There they remained for six weeks. "The batteries of the [Polk's] Corps of the army are all encamped together," wrote Captain James Douglas, commanding a Texas battery. "We have a beautiful camp four miles west of Shelbyville. We have twelve batteries which present a very imposing appearance on drill."[1]

While camped near the renowned Washington Artillery, Captain William Carnes decided to show off his battery. He thus described:

> As we marched from our camp, from more elevated ground, towards the drill field, the Washington Artillery was in plain sight, just concluding their morning maneuvers. "The captain is going to take us right down to have our operations watched by Slocomb's battery"—whose reputation was known to them. Before going into the field, I stopped the company in battery front and riding to the center where all could hear, I told them that I had heard their remarks and that they must remember the drilling we had done [back] at Tupelo and do their level best for the usual short time I would keep them in drill. "Now men," I said, "it is up to you to show whether you can do us well or better than those Louisianians."

The men from New Orleans would be noticeably impressed with what they subsequently saw.[2]

The staggering casualties at Stones River had dangerously depleted the ranks. Tragically, on January 27, a large oak tree in Swett's camp slammed into a tent. "It was an awful sight to behold," George Grammar related. "He [Lieutenant Haven] died instantly. Corporal Goodman was hurt by a piece of limb sticking in his leg. Several others slightly hurt." Bragg needed time to rebuild his thinned divisions, and Rosecrans appeared more than willing to let him have it. The Army of Tennessee thus lulled away the ensuing winter and spring months. "All hands fixing up the battery. Many things out of order," wrote a Mississippi artilleryman.[3]

Considering the lengthy (six months) inactivity after Stones River, discipline problems remained relatively few. Some infractions nonetheless occurred, and the artillery was not exempt. The court found Private John Fraley of Robertson's battery guilty of refusing to obey the order of a lieutenant and sentenced him to ten days of confinement on bread and water. Other cases included those of Private Lawrence Boyle of Waters's battery and Private John A. Scriner of the Eufaula Artillery (absent without leave) and Private I. Seth of Humphreys's battery (leaving camp and stealing a hog), all of whom were found guilty. They received varying punishments; for example, Scriner had to wear a ball and chain for twenty days and forfeit four months of pay.[4]

In order to maintain the efficiency of the batteries, a contest was held to determine the best-drilled battery, the prize being a handsome and highly coveted new banner. "All hands agree that the contest will be between my battery and Scott's," stated Captain Douglas. When it was held a few days later, however, he complained, "I rather think Scott will get the prize, as he is a pet with Bragg's army." A mock battle by Hardee's corps on April 7 celebrated the two-year anniversary of the Battle of Shiloh. According to Washington Artillery gunner Edwin Massina, the "fairest from the surrounding country" observed the spectacle.[5]

The artillery conducted a grueling training schedule throughout the spring. One cannoneer characterized Major Graves as "a most unmerciful drill-master," but the proficiency of the men did appear to improve. A member of the Washington Artillery noted on April 7: "By recent tests our Bat-

tery can be gotten ready to move to any point in 5 minutes. Yesterday batt. hitched up in 14 minutes; piece #6 hitched up in 4 min. Today batt. hitched up in 9 min. (piece #6 in 7 min.). Allowing from 5–6 minutes for sorting of personal effects of cannoneers [took] 6 min.; hitching up 9 [for a total of] 15 min."[6]

George Jones of Stanford's battery commented in his diary about the grinding pace of daily drills:

> April 27: Drilled around the guns all the evening. We dismounted the guns and carriages; remounted and fired five times in one minute.
>
> May 5: Field drill every day, from four to five hours.
>
> May 8–11: We kept up a constant drill in a large open field, always glad when it is over in order to get a rest.[7]

The most pressing need remained the shortage of manpower. After Stones River, the effective strength of the army had dwindled to twenty thousand infantry and fifteen hundred artillery. The Army of the Cumberland was believed to consist of sixty thousand to seventy thousand troops and to be receiving periodic reinforcements. In February, Lieutenant General Polk expressed alarm over intelligence reports and Yankee newspaper stories that Rosecrans had 36 batteries with 216 guns, while Bragg could muster only 20 batteries with 80 guns.[8]

Returning stragglers and a strict roundup of conscripts bolstered the ranks throughout the spring. The latter added ninety-five hundred to the rolls within ten weeks. Replacements brought most of the artillery companies up to strength. By March, Hardee's and Polk's batteries averaged 96 and 103 men present for duty, respectively. Pritchard's two-gun battery was disbanded and nineteen of the men sent to Carnes's battery. Captain Charles Swett went back to Vicksburg to obtain fresh recruits for his company, but he returned empty-handed. He filled his vacancies with a dozen assigned infantrymen. Stanford's battery counted forty more men than it had at original muster.[9]

Additional units also arrived. Several cavalry brigades under Earl Van Dorn came from Mississippi in February. T. J. Churchill's Texas brigade, exchanged since its capture at Arkansas Post, arrived at Tullahoma. Additional

artillery arrived, including Captain W. H. Fowler's Alabama Battery, ordered up from Mobile. By April, Bragg's army had swelled to 40,000 infantry, 15,000 cavalry, and 2,500 artillery with 129 guns, including 25 with the cavalry. Rosecrans nevertheless maintained a two-to-one edge in guns. In addition, in late May, Breckinridge's division was transferred to Mississippi, along with Slocomb's, Mebane's, and Carnes's batteries, partially offsetting earlier gains.[10]

The artillery horses appeared to be "above the average in flesh and grooming." Bragg concurred that they were in "fine condition" and reported no shortages to Richmond. In March 1863 the batteries averaged sixty-nine horses and twenty-five mules apiece, about the same as before Stones River. Inspections turned up a few minor difficulties. A poor system of tying the animals led to some straggling and thefts. A shortage of currycombs also existed.[11]

The favorable reports concerning the livestock proved deceptive. They failed to reveal that hard campaigning, disease, a shortage of long forage, and strenuous overuse had taken its toll. A May 1863 report pointed out that, of the 845 horses in Polk's ten batteries, 255 (fully 1 out of 4) were unserviceable. With replacements harder to come by, Bragg issued an order that all available horses in Atlanta be impressed for his artillery. Georgia governor Joseph Brown issued a complaint, but not before a fresh supply of animals was confiscated.[12]

Transportation also remained in a state of disarray. When an inspector checked Douglas's battery, he reported that "the foraging arrangements of this battery are unsatisfactory. There are only three wagons for all purposes in the company. These run constantly for forage. The distance traveled for it is thirty miles and the time consumed in the trip is three days."[13]

In March 1863 the nineteen batteries in Polk's and Hardee's corps possessed ninety-four vehicles and 424 animals. Only four ambulances, two ordnance wagons, and one traveling forge were among them. The remaining eighty-seven wagons were used to carry baggage and long forage. Ammunition remained scarce beyond the rounds in the caissons and limber chests.[14]

Deficiencies also occurred in ordnance stores. In a February inspection of Cheatham's and McCown's artillery, officers complained of "entirely worthless" paper fuses. The inspector discovered that, almost without exception, spherical case shot were being substituted for shells to gain the ad-

vantage of the metallic Bormann fuse; Confederate laboratories did not attach Bormanns to shells. Cheatham's battalion, except for Turner's company, was deficient in bridles and halters. Douglas's battery suffered from a "general dilapidation and want of care in little things." The ammunition was badly packed, and, warned the inspector, "it will lead to an explosion someday if not corrected." McTyre's battery, though short of currycombs, was in generally better condition. Bad harness plagued both Douglas's and McTyre's batteries, the leather not being greased well. Tallow was often the only lubricant available. Stanford's battery had not received any ammunition since the battle. "This battery [Stanford's] is very effective when properly equipped," observed the inspector.[15]

Criticism concerning the quality of fixed ammunition was heard from other quarters. Captain W. Overton Barret reported that, at Stones River, his battery fired seventy-three rounds of 6-pounder spherical case, nearly all of which burst prematurely. A Tennessee officer grumbled about the inferiority of the powder, which affected the range performance of the projectiles. In March, Captain Henry Semple discovered that arsenal employees had prepared some of the fixed ammunition with rifle powder rather than cannon powder. "Rifle powder is not fit for cannon, as it is so fine and burns so rapidly, that exploding all at once, it endangers the gun and the men who serve it," he charged. Complaints were also heard about "worthless friction primers." In June a board consisting of Lieutenant Colonel James Hallonquist and Majors Felix Robertson, Llewellyn Hoxton, and Melancthon Smith studied the ammunition and made recommendations.[16]

The army chief of ordnance, Colonel Hypolite Oladowski, defended the bureau's workmanship and thought that the problems encountered were largely attributable to the men themselves. Concerning the inferiority of paper fuses, he concurred that those of the Bormann type were "surer to explode projectiles." He maintained, however, that the difficulty in premature bursting could be avoided by careful cutting. "It is ascertained that during engagements the men often cut them through," he commented. The ammunition was "of good quality and well prepared." Oladowski conceded that the harness often broke in a short time, but he blamed this on a deficiency of quality leather and lack of care by the men. Difficulties with friction primers were "more the neglect of artillery officers than their fabrication." Oladowski had toured the Atlanta Arsenal shops and was convinced that

those turned out were uniform in size and superior in quality. He did complain to Colonel John W. Mallet of the Central Laboratory in Macon about the polygonal shells that artillerymen were using in target practice. An inspection showed that the shell fragments were of unequal thickness.[17]

Problems persisted. In early May an inspection of Polk's artillery revealed the deteriorating condition of several gun carriages. Smith's battery had "one gun carriage very clumsy and unsafe—bad material." A new one was also needed in Robertson's battery. All four of those in Stanford's battery were marked for replacement, and a caisson in Cobb's battery was listed as "miserable."[18]

After Stones River, Oladowski had dispersed twenty-one captured caissons throughout the army. Smith's battalion also received a traveling forge and battery wagon. The chief source of battery material for the Army of Tennessee, however, remained the Augusta Arsenal. It produced excellent gun carriages and caissons, but the carpenter shops were clearly overtaxed. Oladowski's continued pleas nonetheless brought some response. Between March 28 and May 22, Colonel G. W. Rains, commanding at Augusta, forwarded to the depots at Tullahoma and Chattanooga twenty-one caissons, thirty-seven limbers, one battery wagon, and three traveling forges.[19]

By the end of spring, the batteries appear to have been generally well equipped in the basics, although ammunition remained in demand. When Polk's batteries returned to Shelbyville, an inventory was taken of Melancthon Smith's battalion. Each of the four batteries had a caisson for every gun and a traveling forge and battery wagon for the company, complete with a set of tools for blacksmiths, carpenters, and harness makers. A dearth of currycombs remained, there being only 125 in the battalion, but the harness proved adequate, and there were fifty-five hundred friction primers available.[20]

The most serious shortages remained in the supply of fixed ammunition. In addition to replenishing the large number of rounds expended at Stones River, Oladowski attempted to stockpile fifty rounds per gun at the Columbus Arsenal and one hundred rounds per gun at the Atlanta Arsenal. The goal proved impossible to meet. In late April 1863, the supply of ammunition remained far below the prescribed two hundred rounds per gun. At that time, 18,942 rounds were on hand, 16 percent of which were short-range canister. This amounted to 163 rounds apiece for the 12-pounder Napoleon

Table 3. Ammunition on Hand, April 30, 1863

Type	Number	Average Per Gun
12-Pounder Shells	992	47
12-Pounder Shot	1,129	54
12-Pounder Spherical Case	910	41
12-Pounder Canister	398	19
6-Pounder Shot	2,507	72
6-Pounder Spherical Case Shot	2,332	67
6-Pounder Canister	1,137	32
12-Pounder Howitzer Shells	1,583	39
12-Pounder Howitzer Spherical Case Shot	2,724	66
12-Pounder Howitzer Canister	1,023	23
20-Pounder Parrott Shell	300	150
3-Inch Shot	560	47
3-Inch Canister	340	28
3.3-Inch Shell	133	66
3.8-Inch Shell	756	76
3.8-Inch Shot	382	38
3.8-Inch Canister	122	12

guns, 171 for the 6-pounders, and 130 for the howitzers. Rifled ammunition proved even more scarce: 95 apiece for the 10-pounder Parrotts, 75 for the 3-inch rifles, and 66 for the 3.3-inch rifles.[21] See table 3.

The armament was also a growing cause of concern. Inspections turned up several fieldpieces in run-down condition. A gun in Swett's battery had to be immediately replaced after Stones River, a foot of the muzzle having been blown away. In February, an inspector reported a badly scarred 12-pounder howitzer in Douglas's battery. Although the howitzer was still serviceable, a replacement was requested. Several months later, an inspector noted that two Leeds & Company 12-pounder howitzers in Waters's battery needed to be exchanged, as well as a damaged howitzer in Humphreys's battery. In April, an inspection of a 12-pounder howitzer in Barret's battery uncovered several bore indentions, but "none sufficiently deep nor the edge jagged to render it unserviceable."[22]

An even bigger problem related to the rifle guns. Bronze rifles had long proved to be troublesome. Their rifling grooves were notorious for quickly wearing down. When this occurred, the guns became useless. In January, Oladowski turned in two of them. In May the rifling grooves in all four bronze 3-inch rifles in Stanford's battery were reported to be "worn down near the bottom of the bore." The same situation cropped up again in the fall. At that time, two bronze 6-pounder rifles in Swett's battery needed to be exchanged because the rifling grooves were worn out between the trunnions and the breach.[23]

There was a larger and more far-reaching element in the armament deficiency. The 6-pounder and 12-pounder howitzers, standard weapons of the western Confederate field artillery, were continually being outmatched by the more powerful long-range guns of the enemy. The smoke had barely cleared from the Stones River battlefield before battery commanders began complaining of their inadequate armament. "Six-pounder guns cannot maintain a fight with long range guns," declared one officer. The 6-pounder was also considered too heavy for use with the cavalry. At Stones River, Rosecrans held a commanding edge in rifles. Some relief came in early 1863, when Bragg issued seven 3.8-inch bronze rifles and two 3.65-inch iron Wiard rifles, Yankee trophies from the late battle. Richmond also sent down two large 20-pounder Parrott rifles.[24]

That spring, Bragg began a program of armament modernization. The weapon selected to become the backbone of his artillery was a bronze smoothbore gun: the light 12-pounder Napoleon. It had been developed by the French in the late 1850s and named after Louis Napoleon III. Designed as a hybrid weapon, it had a range of a gun (1,680 yards for solid shot) and could also fire the explosive shell or spherical case shot of the howitzer. At distances of three hundred yards or less, it could spew out canister balls like a sawed-off shotgun. Also, the reliability of smoothbore ammunition stood in stark contrast to that of unsure rifle projectiles.[25]

In March, Bragg ordered that all of his old 6-pounders be gradually phased out and recast into light 12-pounders. At that time, his artillery comprised 123 pieces: forty 6-pounders, forty 12-pounder howitzers, sixteen 12-pounder Napoleons, six 10-pounder Parrott rifles, seven 3.8-inch rifles, eleven 3-inch rifles, two 3.3-inch rifles, and one Ellsworth breech-loading gun.[26]

The main supplier of Napoleons to the Army of Tennessee was the Confederate foundry at Augusta, Georgia. The guns were cast of a metal that had been recently invented by the Austrians and recommended by Confederate diplomat James Mason. It was a composition of copper, tin, wrought iron, and zinc, which gave a higher pitch in boom as compared with the lower bass sound of the Federal guns. Casting at Augusta began in late 1862, and by the following spring some seventy pieces had been cast. Their exterior appearance differed from Federal pieces of the same caliber by the lack of a muzzle swell and a more slender cascabel. Soon many guns in the Army of Tennessee would be bearing the "GOVT. FOUNDRY & MACHINE WORKS" stamp.[27]

Not until the spring of 1863 did the government foundries at Macon and Columbus, Georgia, begin to turn out 12-pounder Napoleon guns, and their first priority was not Bragg's army. In February, Oladowski was informed that he should not expect any Columbus Napoleons for at least six months. Early deliveries went to the Mobile defense. Macon completed its first two Napoleon batteries in June 1863, both of which were shipped to the Army of Mississippi. Lack of a governmental priority, such as was given Lee's army, retarded Bragg's modernization program. During the first four months of 1863, the Army of Northern Virginia received forty-nine new light 12-pounders; the Army of Tennessee received only five.[28]

By late April, the armament composition had changed little. Bragg counted 117 guns: thirty-five 6-pounders, forty-one 12-pounder howitzers, twenty-one 12-pounder Napoleons, four 10-pounder Parrott rifles, two 20-pounder Parrott rifles, two 3.3-inch rifles, ten 3.8-inch James rifles, and two 3.65-inch Wiard rifles. In May, Polk's artillery consisted of ten batteries of forty-two guns. Robertson's Florida and Smith's Mississippi batteries had six and four 12-pounder guns, respectively. Stanford's battery had four 3-inch bronze rifles, and the remaining companies (Barret's, Humphreys's, Swett's, and Waters's) each had two 6-pounders and two 12-pounder howitzers.[29]

Oladowski continued to press for more guns during May. Swett soon received two Napoleon guns, replacing his 6-pounders. On May 22 he wrote Colonel M. H. Wright at the Atlanta Arsenal that he could not send in any more 6-pounders for recasting until he had other guns to replace them. "I respectfully request you to send from your arsenal to Augusta such guns

(bronze) as you may deem unfit for service and I shall send you guns which will be exchanged as soon as I will receive in their place 12-pounder light guns," he declared.[30]

An exchange pipeline soon opened. When Oladowski was informed that a battery of Augusta Napoleon guns would soon arrive, he turned in a bronze Leeds & Company 6-pounder from Fowler's battery for recasting. In early June, six new Augusta Napoleons, complete with gun carriages and caissons, were sent by rail to Bragg. Unfortunately, the train derailed en route. The gun tubes remained uninjured, but the carriages and caissons had been reduced to rubble. The debris had to be sent back to the arsenal for reworking.[31]

While Bragg continued to receive guns in driblets, Rosecrans modernized with lightning speed. At Stones River, the Northern command possessed only ten Napoleon guns; by May 1, 1863, it had fifty-six. The weapons bore such names as "Greenwood & Co., Cincinnati" and "Revere Cooper Co., Boston." Indeed, only twenty-seven 6-pounder and 12-pounder howitzers remained at that time. The ninety-eight rifles were almost evenly divided among 10-pounder Parrott rifles, 3-inch rifles, and James rifles. After Stones River, Lieutenant General Hardee had observed that "the long range cannon and improved projectiles can be made only by great mechanical skill, heavy machinery and abundant resources." The Northern industrial complex was proving his statement to be depressingly correct.[32]

7
Of Officers and Organization: The Artillery Infrastructure

On the surface, it appeared as though Bragg successfully welded together an efficient artillery command structure. His chiefs were young, knowledgeable, and well educated. Yet, although several of them were West Pointers with regular army experience, none had any combat experience or training in the handling of groups of guns. When compared with Robert E. Lee's officers, they were a rather lackluster, undistinguished group. Even more disturbing, the rank of several was related more to loyalty to Bragg than to performance.

By late 1862 the higher echelon of the Army of Tennessee had assumed a curious quality. Sensing an ever-growing hostility among numbers of his officers, Bragg increasingly surrounded himself with a cadre of hard-core supporters who had served under him in the early months of the Department of the Gulf. The list transcended every branch: Generals Jones Withers and Patton Anderson in the infantry, General Joseph Wheeler in the cavalry, and Lieutenant Colonel James H. Hallonquist and Major Felix Robertson in the artillery.[1]

James H. Hallonquist, a native of South Carolina, rose to the top fast—probably too fast. He was a West Point graduate (class of '58) who had served in the Fourth U.S. Artillery, though he lacked combat experience. Much of his military service had been spent in the nonglorious position of artillery inspector at Fort Monroe, Virginia. In the first few months of the present war he served as an ordinance officer at Pensacola and later as an inspector and mustering officer at Mobile. When Bragg moved his corps to Corinth, he requested the young major as his artillery chief. Shortly after Shiloh, Hallonquist was promoted to lieutenant colonel and was soon ap-

pointed as chief of artillery of the Army of Tennessee. He was twenty-eight years old at the time. Little in his record suggested that he was ready to handle the new responsibilities that had been thrust upon him.[2]

Hallonquist never seemed to rise above the low-level tedium that had characterized his earlier career. He gave personal attention to matters that could have been best left to subordinates. While the army went into winter quarters in and around Tullahoma, Hallonquist journeyed to Atlanta to oversee personally the equipping of several batteries. He returned in March 1863 and began supervising the test firing of several 6-pounders. That fall, he squabbled with ordnance officers over minor issues. In short, he was preoccupied with housekeeping details to the exclusion of administrative and tactical innovation. His career remained closely aligned with Bragg's, and he rapidly lost status when the general later departed. Nor was he a success in his postwar engineering business. Heavy drinking and financial reversals led him to commit suicide in 1883 at the age of forty-nine.[3]

Another Bragg protégé was an odd-looking Texan by the name of Felix H. Robertson. Robertson had entered West Point in 1857 at the age of eighteen and resigned in January 1861, only three weeks before his graduation, because of what he termed the "political action of my section." He offered his services to the Confederacy and was assigned to Charleston. There, he first met Hallonquist. How closely associated they were is not known, but on April 20, 1861, both were transferred to Bragg at Pensacola. Robertson ably commanded a Florida battery at Shiloh, but it was his close ties with Bragg that propelled him into the position of acting chief of artillery of Polk's corps in the December 1862 reorganization. The Texan would eventually attain the rank of brigadier, a grade also held by his father, Jerome Robertson, in Lee's army.[4]

Robertson proved a harsh disciplinarian who was intensely disliked by his men. Because of his dark complexion and slanted eyes, rumors spread that he was of Indian descent. His name around the campfire became "Comanche Robertson." When a drunken artilleryman called him "half Injin'" one night, however, he paid dearly. The captain had the man strung up by his thumbs with his feet barely touching the ground. The cruel punishment incurred so much animosity among the men that some of them expected the young Texan to be murdered.[5]

After Stones River, Bragg became involved in an obsessive vendetta to

purge the army of those generals who disliked him. The artillery was not unaffected by this high-level power struggle. In an attempt to gain evidence against Major General John C. Breckinridge, Bragg turned to his old crony Robertson. Because the captain's Stones River report had not been particularly critical of Breckinridge, Bragg requested that he resubmit a revised report that would "do justice." The report would skip regular channels and come directly to army headquarters. Robertson understood what was expected. He now wrote a scathing denunciation of Breckinridge's conduct during the January 2 assault. Shortly thereafter, the captain was allowed a brief tour in Richmond (a payoff for his loyalty to Bragg, asserts one historian), during which time he lobbied on Bragg's behalf. On his return, he was greeted with a major's commission (Bragg's attempt to obtain him a lieutenant colonelcy proved unsuccessful) and command of the newly organized artillery reserve, an organization that would report directly to army headquarters. All of this came on the heels of Robertson's own miserable performance at Stones River.[6]

Another Bragg favorite was Captain J. R. B. Burtwell. Much to the chagrin of a crack Georgia battery, the Washington Artillery of Augusta, the general overturned the results of the company election in the summer of 1862 and appointed Burtwell as captain. In late 1862, he again pushed him up the ladder, this time as artillery chief of Withers's division.[7]

By the spring of 1863, a distressing situation had arisen in the artillery officer corps. It centered chiefly on the lack of advancement opportunities and the often capricious manner in which promotions were meted out. Several factors restricted advancement. The number of executive officers was regulated by law, and the War Department was slow in approving nominations. At Stones River, the law authorized one colonel, one lieutenant colonel, and six majors. Bragg's seven chiefs of artillery actually consisted of one lieutenant colonel, three majors, and three captains (see table 4).

Too, a high casualty rate in the infantry morbidly assured a constant turnover in officers; such was not the case in the artillery, however. By the spring of 1863, not one of its line officers had been killed in battle. Although this meant that officers of long experience served in the artillery, it also meant a bottleneck in the promotion system. On account of a similar situation in Robert E. Lee's army, many of his officers transferred to other

Table 4. General Bragg's Chiefs of Artillery

Name	Command
Lt. Col. James H. Hallonquist	Army of Tennessee
Captain Thomas R. Hotchkiss	Hardee's Corps (Acting Chief)
Maj. Rice Graves	Breckinridge's Division
Maj. George Mathes	McCown's Division
Captain Felix H. Robertson	Polk's Corps (Acting Chief)
Maj. Melancthon Smith	Cheatham's Division
Capt. J .R. B. Burtwell	Withers's Division

branches for advancement. This simply did not occur in the western long arm. The result was that artillery officers remained in grade for lengthy periods.[8]

The early months of 1863 brought little relief. Hallonquist still shouldered the insignia of a lieutenant colonel. Several battalion commanders in Lee's artillery at that time held higher grade. Lieutenant General Hardee informed the War Department in March that, though he had thirty-four guns, no officers of field grade were assigned: "Each division of my corps has an officer of artillery, acting as its chief one of whom has been recommended as a major; the other is a captain, acting temporarily until the vacancy occasioned by the assignment of the former chief to duty elsewhere is filled." The battery commanders in Cheatham's division personally petitioned the War Department concerning a promotion for their battalion commander, Major Melancthon Smith. The request was denied. As late as June 1863, the War Department had still not approved the nominations of Captains Burtwell and Robertson to major. "Difficulties arise constantly under the general order for massing artillery for the want of proper field officers," Bragg informed Richmond.[9]

The lack of promotion opportunity was only half the problem. The selection of those to be advanced created the thornier issue. Bragg had earlier embarked on a campaign of patronage by elevating his personal favorites—James Hallonquist, Felix Robertson, and J. R. B. Burtwell, all three a part of Bragg's old Pensacola army—to the highest levels of responsibility. A pro-

motion policy seemingly based on a "favored son" status continued to persist. Bragg even went so far as to overturn the election results in a battery to appoint his old battery sergeant from the Mexican War as lieutenant.[10]

Perhaps the most irritating aspect of this patronage system was a complete disregard for seniority. The results of this policy were predictable—jealousies and friction. In December 1862, Bragg appointed Lieutenant John W. Morton as Nathan Bedford Forrest's artillery chief. The young lieutenant had served well at Fort Donelson and, impressed with Forrest's dramatic escape there, had requested service in his command. Yet, Morton's youth (he later became the youngest captain in the Confederacy) and limited experience hardly merited the assignment. Furthermore, he lacked the rank of the man he replaced, Captain S. F. Freeman. Forrest was enraged. "I'd like to know why in the hell Bragg sent that tallow-faced kid here to take charge of my artillery," he barked. "I'll not stand it. Captain Freeman shan't be interfered with." The appointment stood, however, and Morton later became the finest horse artilleryman in the western theater. That fact failed to alter the capricious nature of his original appointment.[11]

In January 1863, Captain John Wesley Eldridge was promoted to major on the personal recommendation of Bragg, commanding the artillery of A. P. Stewart's newly created division. Although Eldridge's service record was good, he lacked seniority, held limited battlefield experience, and only a few months earlier had lost a reelection bid to command his own Tennessee battery. Furthermore, Bragg overrode Stewart's recommendation of Captain Thomas J. Stanford, the senior artillery officer in the division.[12]

Perhaps no other appointment created more furor than that of Captain Thomas R. Hotchkiss of Mississippi, an ordnance officer who had been temporarily assigned as Major General Cleburne's artillery chief just prior to Stones River. During the battle, Hotchkiss kept good control of his batteries and was twice wounded. In May 1863 he was promoted to major and permanently assigned the position.[13]

The appointment had barely been consummated before outcries filled the air. Captain Henry Semple, Cleburne's senior battery commander, angrily charged that Hotchkiss had never formally been tested for the position. He added: "I have the honor to represent upon my observations, that the Major is very illiterate, as his written orders in my possession amply testify. As far as I can judge, his acquaintances with the drill of Light Artil-

lery is very imperfect, and his education has been so indifferent, that he is almost totally ignorant of the simplest hunches of mathematics." He urged that a board be appointed to examine Hotchkiss's competency. The unusual request angered the army chief of artillery. "I entirely disapprove of subordinates applying for the examination of superiors," wrote Hallonquist. Cleburne, too, thought that Semple had become "unduly prejudiced." Hotchkiss maintained his position, but bad blood persisted between the officers.[14]

The Hotchkiss-Semple feud pointed to the need for standardized testing as a means of evaluating officers and of avoiding the perception of favoritism. Bragg himself admitted that a "general examination of artillery officers would disclose much incompetency and improve the service." In July, Majors Hotchkiss and Eldridge were belatedly called before an examining board in Chattanooga and given oral examinations.[15]

In late summer, Major General Thomas Hindman replaced the ailing Withers as division commander. Major J. R. B. Burtwell, formerly of the Augusta Washington Artillery, had already been shifted from the artillery to division ordnance officer. In the fall of 1862 he would be transferred to the Twenty-sixth Alabama. Assuming the position of Hindman's artillery chief that summer would be Major Alfred R. Courtney, a thirty-year-old former Virginia attorney and recent transfer to the army. He had organized his own battery in Robert E. Lee's army and rose to battalion command. His subsequent performance at Antietam proved so dismal that he had charges preferred against him: neglect of duty, disobedience of orders, and absent without leave. Although found guilty, he received a mere slap on the wrist. He spent a brief stint in the inspector general's office before being banished to the west.[16]

When General Braxton Bragg rose to command of the Army of Tennessee, the assumption might have been that the western artillery was destined to attain its high tide. It was in the artillery that Bragg had trained in the regular army and risen to prominence during the Mexican War. Yet, as army commander, Bragg did not seem to know what to do with his artillery. In the end, it was his strength (long artillery service) that proved to be his greatest weakness. The artillery was undergoing a transition, something he failed to appreciate. His old army mentality prevented him from fully grasping the concept of centralized control, the tactical massing of guns, and the

changing supportive role of the artillery. His approaches were tried and tested, but by the time of the Civil War they were obsolete.

Bragg first exhibited this failure on a tactical level. As a corps commander at Shiloh, he fell back on his old army training. He had batteries individually pound away at the Hornet's Nest, while he resorted to the shock method of the infantry assault. At the Round Forrest at Stones River, he merely repeated his earlier errors. Bragg also erred on an organizational level. Locking himself into the old system, he lacked the flexibility to reevaluate structures. Although he introduced a degree of organization in the long arm, his efforts were at best unimaginative and at worst parochial.

Bragg reorganized the army in August 1862 and made additional modifications in December. His artillery organization remained outdated and incomplete. The largely ineffective performance of the western long arm throughout 1862 lay primarily in its fragmentation: assigning a battery to a brigade. Bragg did now loosely group his division batteries together into battalions, but the label was misleading. Batteries were still assigned to and operated with individual brigades. Division artillery chiefs held such slight clout that frequently the senior battery commander of the division doubled in this capacity. Captain Charles Swett, for example, commanded his own Mississippi battery and, as senior officer, served as Cleburne's artillery chief. Major Melancthon Smith was not involved in the initial attack at Stones River on December 31, being in the rear. His adjutant attached himself to Cheatham's headquarters as an aide.[17]

In the spring of 1863, Bragg again reorganized his army. In May the War Department ordered J. P. McCown's and John C. Breckinridge's divisions and Earl Van Dorn's cavalry division to Mississippi. Breckinridge's artillery, minus Anderson's battery, and Van Dorn's horse artillery also departed, but McCown's batteries remained and were reassigned. A hastily formed division assembled under A. P. Stewart, which added a fourth division to the army. All the batteries were reduced to four guns each, except Robertson's and Slocomb's, which retained six apiece.[18]

As late as January 1863, Bragg still rigidly adhered to the brigade-battery organization. Revisions came only after prodding from above. On January 7, the War Department issued the rather poorly worded General Order No. 7. The artillery was at long last established as a separate arm, distinct from the infantry. Based on the model of Lee's artillery, the order also fixed the divi-

sion as the level of operation for the long arm. The order was put into effect in the Army of Tennessee in April.[19]

The new plan provided several long-needed revisions. Division artillery chiefs received increased executive and administrative authority. They would henceforth control the tactical maneuvers of the batteries, receiving orders from division and corps commanders. Battery reports would also be made directly to them, rather than the brigadiers. In camp, division batteries would be parked together, rather than with their respective brigades. The directive was not as far-reaching as might be hoped. The batteries would still march with and receive rations from their brigades, and on outpost duty they would be under the direct control of brigadiers. Despite directives, the battalion structure seemed more ad hoc than a sweeping change. Indeed, on June 22, 1863, Ed Goelet, adjutant to Major Melancthon Smith, wrote: "About three weeks ago the batteries were all dispersed to their brigades again and Maj. Smith and myself came back to [Division] Hd Qrs. again." Still, a slight stride had been made in liberating the artillery from the control of brigadiers.[20]

Bragg did bring two new dimensions to the western long arm when he organized an artillery reserve and a horse artillery. The former soon disintegrated, and the latter would require months for fruition. Bragg set aside three companies as a reserve in the fall of 1862: Gibson's Georgia, Baxter's Tennessee, and Byrne's Kentucky. It represented little more than a collection of unattached batteries commanded by no single officer. No sooner had the organization been formed than it fell apart. On December 1, 1862, Gibson's battery was ordered to Chattanooga to be refitted. On the thirty-first, Baxter's battery, which had been mustered in only weeks earlier in Dickson County, was detached for garrison duty at Shelbyville. This left only Byrne's company, which served as unattached.[21]

In February 1863, Bragg resurrected his defunct artillery reserve. Four batteries—Massenburg's, Lumsden's, Barret's, and Havis's—were set aside at Estelle Springs and specially equipped. The armament consisted of the best guns available, many of them captured Federal pieces. The Napoleon guns each received two caissons so that a full load of two hundred rounds might be carried. The rifle guns were also furnished a higher than usual number of rounds. On April 30 the reserve comprised 7 12-pounder Napoleon guns, 2 20-pounder Parrott rifles, 1 10-pounder Parrott rifle, 4 3.8-inch bronze

rifles, 2 3.65-inch Wiard rifles, 1 3-inch rifle, 28 caissons, 2 battery wagons, 3 traveling forges, 180 horses, 130 mules, and 174 single sets of harness. Not everyone was satisfied. Hardee complained loudly about the loss of two of his best batteries to the new organization.[22]

Much to the chagrin of the newly organized reserve, Captain Robertson was given command. As noted earlier, the harsh disciplinary measures instituted by the bantam young captain marked him as one of the most unpopular officers in the artillery. The men of Havis's battery cheered when they heard in June that they would be transferred back to Hardee's corps. As the company marched past Robertson's headquarters, some of the men shouted: "Goodbye Comanche." The battalion adjutant heard the captain to mumble: "Never mind, I'll have you again." He thereupon proceeded to general headquarters, where he requested of Bragg, and was subsequently granted, the return of the battery. It was a mournful set of men who returned to their old camp on Duck River. James Searcy expressed no surprise on hearing that Barret's battery had been assigned to the reserve: "Capt. Barret and Robertson are considerable cronies."[23]

Bragg also formed the nucleus of a horse artillery in the fall of 1862. In October 1862, Captain Samuel F. Freeman's six-gun Tennessee Battery began operating with Nathan Bedford Forrest's cavalry brigade. The next month, J. H. Wiggins's Arkansas Battery and B. F. White's Tennessee Battery reported to Wheeler's cavalry brigade. John H. Morgan's partisan brigade also had a section of Ellsworth rifles attached.[24]

In December 1862, Forrest swept through western Tennessee. At Lexington, a section of guns, commanded by Lieutenant John Morton, engaged two Yankee 3-inch steel rifles. The enemy cannoneers were driven off and the pieces captured. Dubbed "bull-pups" by Forrest, they became the pride of his artillery. Morton acquired them, and a new Tennessee battery formed. At Humboldt, the newly organized company aimed the rifles at a loaded troop train. Morton wrote that the startled bluecoats "tumbled off into the swamp, running in all directions." Later the cannoneers would even engage gunboats.[25]

In the spring of 1863, the infant horse artillery ran into trouble. On April 19, Freeman's Tennessee Battery was moving down the Lewisburg Pike near Franklin when it suddenly stumbled into the Fourth U.S. Cavalry. The troopers overran the gunners before they could even unlimber. Several offi-

cers and men were killed, and thirty-one were captured, including Captain Freeman, who was murdered when he could not keep pace with the retreating Yankees. The troopers abandoned the cannon after hacking up the gun carriage wheels. On May 22, a Yankee scouting party captured one of Wiggins's guns, but it was quickly retaken.[26]

Bragg perhaps should not bear total culpability for the inept artillery organization that existed in the Army of Tennessee during his first year of command. In the Virginia army, the design and advancement of a highly effective structure came about largely through the army's top artillerymen: William N. Pendleton, E. P. Alexander, and Stapleton Crutchfield. These men had been spurred into action by Robert E. Lee, however. That Bragg lacked the highly creative officers found in Lee's artillery was not entirely his fault. His failure came in not providing the impetus for change. Perhaps the greatest irony was that, in his younger days in the regular artillery, he had been seen as somewhat of a visionary. As a commanding general, however, youthful vision gave way to inflexibility.

8
A Fateful Autumn

Throughout the winter and spring of 1863, the Army of Tennessee enjoyed a protracted period of inactivity along the Duck River. Captain Overton Barret enjoyed "excellent health, as all in my company are," he wrote his mother on June 11. "You have no idea how much more comfortable an artillery captain lives than a colonel of a regiment," he continued, noting his large tent that he shared with no one. He added: "I have the satisfaction too of having a good Battery of Yankee guns captured by our brigade [Walthall's] at the Battle before Murfreesboro."[1]

During the latter part of June, the army was abruptly shaken from its quiescence. Advancing from Murfreesboro, Rosecrans seized Hoover and Liberty gaps, buckling the Confederate right wing. At the former, Darden's battery and the Eufaula Artillery dueled with the Eighteenth Indiana Light Artillery (ten guns). Wrote a Hoosier gunner: "We replied, and for about twenty minutes the roar was tremendous, shot and shell filling the air. The Rebels overshot as usual, their fire just passing above our guns and coming comfortably close to our hands. Our gunners replied with percussion shell, exploding them right among their guns—finally dismounting one. The Rebels concluded this was too hot and withdrew." Bragg abandoned Tullahoma and pulled back across the Elk River.[2]

Will Martin's division of Wheeler's cavalry held Guy's Gap. Federal cavalry struck hard on June 27, driving the gray troopers back through Shelbyville. The withdrawal degenerated into a rout in which seven hundred Rebels fell captive and J. H. Wiggins's Arkansas Battery was wrecked, losing three guns, eight to ten wounded, and thirty captured, including the cap-

tain. Wheeler and the remnant of the division escaped by ignominiously jumping into the swollen Duck River.[3]

The Confederates continued to retreat to Cowan, Tennessee. As they did so, Churchill's brigade and Douglas's battery supported the cavalry on the left at the Allisonia Bridge. The enemy soon appeared. "A heavy battery opened on my position," wrote Douglas. "Major Hotchkiss ordered my cannoneers to fire, but I took the responsibility to order them to lie down until I gave the word as the enemy shells were doing us no harm and we were not in position to do them much damage." Following the brief exchange, the rearguard retired.[4]

The army entered Chattanooga during the first week of July. The retreat from Tullahoma had been an ordnance, as well as a strategic, disaster. All along the roadside were strewn knapsacks, cartridge boxes, and muskets. Artillery losses were not so severe, but Major Smith reported the abandonment of ten sets of artillery harness, and Major Burtwell noted that twelve sets of artillery harness, one traveling forge, and a battery wagon had been left behind. The train transporting Semple's battery wrecked near Chattanooga, damaging the gun carriages and wheels. Two weeks would be required to get new ones.[5]

Bragg's army, forty-three thousand strong, encamped at Chattanooga throughout the remainder of the summer. His artillery comprised twenty-six batteries, with 2,645 men present for duty. A weak battalion structure was in place, with one to each division and a reserve battalion. Lumsden's and Dent's batteries remained six-gun outfits, as did those of Freeman and Morton of Forrest's cavalry. All others had been reduced to four guns, with the exception of Pritchard's two-gun section, which would shortly be reassigned.[6]

On July 14, Major Smith took an inventory of his four batteries, which were camped outside Chattanooga. He counted sixteen pieces (four 6-pounders, four 12-pounder Napoleons, four 12-pounder howitzers, and four 3-inch rifles), each with its own caisson, with a battery wagon and forge accompanying each battery. Although an adequate number of friction primers were on hand, the ammunition supply fell somewhat short. The Napoleons averaged 188 rounds per gun, the howitzers 151, the 6-pounders 185, and the rifles 206.[7]

The lull provided an opportunity to catch up on target practice. On August 6, Private Magee of Stanford's battery wrote: "Commenced firing at 10 o'clock with first piece—very unsatisfactory. Each gun has four shots allowed it. The second piece followed us. Neither one hit the target a distance of 1,400 yards. Will not fire the 3rd and 4th pieces—are unfit." William Brown admitted that "the shots went a little wild." That same day, Private Grammar of Swett's battery commented: "Swett's and Douglas' batteries had target practice, distance of 1,200 yards, for the purpose of trying our guns. Neither hit the target although a few good line shots were made."

The next day Magee jotted in his diary: "Resumed firing at 10 o'clock—no better success. Our battery condemned. We will get a new battery of Napoleon guns." Concerning their bronze 3-inch rifles, William Brown remarked that "not a sign of a groove [rifling] left in any barrel." Continuing on the eighth, Magee wrote: "Fowler's battery fire today—very good shooting. Struck the target twice [at] 1,400 yards. Smith's old battery commanded by Lt. Turner also fired. Struck the target twice [at] 1,250 yards. He made very good shots. The shooting from all the batteries except Fowler's and Scott's was very bad." Polk concluded his training with a grand review of his corps artillery.[8]

Hardee now transferred to Mississippi, being replaced by Lieutenant General Daniel H. Hill, formerly of the Army of Northern Virginia. Hill's corps comprised Cleburne's and Stewart's divisions, and Polk had those of Cheatham and Hindman. Hill brought with him his own artillery chief, Major James H. Bondurant, who would soon be promoted to lieutenant colonel. Two years earlier, he had begun the war commanding a single gun; he now led thirty-two.[9]

Unaware that Hill already had an artillery chief, Bragg assigned Melancthon Smith. "About the first of this month [August], Major Smith was relieved from duty with Cheatham's Division and ordered on duty as Chief of Artillery of Hill's Corps," wrote Ed Goelet, Smith's adjutant. "We did not like to leave Cheatham, but as it would give him promotion to Lieut. Col. he concluded to accept it. So we moved up to Tyner's Station, about eleven miles distant from this place [Chattanooga], and when arrived there found that Genl. Hill had brought a chief of artillery with him from Virginia." Abating Smith's disappointing return to Chattanooga was a visit from his wife and little son.[10]

By mid-August the Union army was again on the prowl. On Sunday morning, August 21, six guns of the Eighteenth Indiana Light Artillery suddenly opened fire from their position atop Stringer's Ridge in Chattanooga. Shells began dropping indiscriminately, sending civilians and soldiers alike scrambling for cover. The Confederate return fire created little damage, and its feebleness proved embarrassing. An estimated nineteen guns opened, but all the shots fell harmlessly on the hillside below, unable to make the two-thousand-yard range. Gunners finally unleashed a 32-pounder siege gun, which made a direct hit with the first shot, mortally wounding a Yankee cannoneer and killing four horses. For all intents and purposes, however, the Federals had matters their own way, as they continued two days of sporadic shelling. "This [artillery fire] we cannot prevent," Bragg conceded.[11]

In a series of rapid marches reminiscent of the Tullahoma campaign, Rosecrans outmaneuvered Bragg and forced him out of Chattanooga. Union troops entered the town on September 9, a day behind the Southerners, who withdrew to Lafayette, Georgia. "The weather is very warm and dry and there is more dust than I ever saw before. I hope it will rain soon and settle the dust," cannoneer Isaac Thomas of Stanford's battery reported to his wife on September 17. He planned on delivering the letter by a civilian "who has two sons in our battery."[12]

Rosecrans pursued. His sixty-thousand-man Army of the Cumberland comprised his former three corps, plus a new reserve corps under Gordon Granger, which comprised mostly raw troops drawn from garrison duty in Kentucky. The reorganized cavalry had two divisions. The powerful Federal long arm consisted of an impressive thirty-four batteries with 204 guns, half rifles and half smoothbores. Nearly three-fourths of the last were 12-pounder Napoleon guns. Organized into divisional groupings, the batteries nonetheless ineffectively continued to operate much of the time with assigned brigades, not unlike the Confederate organization.[13]

Unbeknown to Rosecrans, Bragg was gathering heavy reinforcements. Simon Buckner's division near Knoxville united with the army, bringing Major Samuel C. Williams's battalion (the batteries of Baxter's Tennessee, Kolb's Alabama, and McCants's Florida), and Major A. Leyden's Ninth Georgia Artillery Battalion (Companies C, D, and E and Jeffress's Nottoway Virginia Artillery). Williams, a Tennessean, had the rather unlikely nickname of "Susan" while at West Point, although his propensity for cussing and

brawling revealed no effeminate trait. So eager was he for secession that he did not wait to graduate. "He is perfectly demented," wrote a classmate, who felt that he had "jumped the gun." Captain William C. Jeffress, thirty-eight years old and a graduate of the Virginia Military Institute (class of '43), ran a plantation and practiced law prior to the war. Commanding the East Tennessee artillery would be Major Thomas Porter, who had been severely wounded at Fort Donelson and subsequently had his leg amputated. Commanding (as of August 20, 1863) the two battalions was newly promoted Major William Owen of the Washington Artillery of Lee's army.[14]

General Joseph E. Johnston sent from his army in Mississippi the divisions of John C. Breckinridge and W. H. T. Walker and the brigades of John Gregg and Evander McNair, totaling eleven thousand troops. Breckinridge's division, which would be reuniting with the Army of Tennessee, included Major Rice Graves's battalion of artillery. Ferguson's South Carolina Battery and Martin's Georgia Battery accompanied Walker. The former had been raised in Charleston back in April 1862 and was commanded by Citadel graduate Captain Thomas B. Ferguson, who subsequently fell wounded in July 1863. Thereafter Lieutenant René Beauregard, son of the famed general, commanded. Also on the way was Culpeper's South Carolina Battery, led by another Citadel graduate, Captain James F. Culpeper. The artillery trailed far in the rear, although the men, guns, and all the horses except for those of Graves's battalion came by rail. As late as September 4, Bragg telegraphed Walker: "Send an officer to Atlanta to stop your artillery and take it to Kingston. If the guns and horses are not on the same train, let the one be halted at Atlanta until the other comes up, that both may reach Kingston and Rome together."[15]

Bragg's largest accession, Lieutenant General James Longstreet's corps, came from the Army of Northern Virginia. The fifteen thousand troops and Colonel Edward Porter Alexander's battalion of six batteries made the grueling nine-hundred-mile journey from Orange Courthouse, Virginia, via Petersburg, Wilmington, Augusta, and Atlanta. Men and equipment changed trains on several occasions due to varying railroad gauges. Only five brigades (nine thousand men) and none of the artillery made it in time to participate in the upcoming battle.[16]

By mid-September, Bragg's enlarged artillery corps (not including Alexander's battalion, three batteries en route, and the horse artillery) comprised

thirty-four batteries with about 140 guns. In addition to the Army of Tennessee's nineteen batteries (seventy-five guns), Buckner's East Tennessee corps furnished nine batteries (thirty-seven guns), and the Army of Mississippi provided six batteries (twenty-eight guns). Although most of the companies had four guns, there was frequent lack of uniformity. Still, this would be one of the few occasions in which the western artillery would approach numerical parity with its Federal counterpart (table 5).[17]

It is difficult to imagine a more confused organizational structure than that adopted. The army would be divided into two wings under Polk and Longstreet. The former had two corps (one listed as a reserve), each with two divisions, plus Cheatham's division, which remained unattached. Longstreet likewise had two corps, each with two divisions, and an unattached division (Hindman's). Much of the organization was provisional, prompting the shifting of divisions and brigades. The unwieldy artillery organization showed little sign of streamlining. Virtually all the battalions were broken up, leaving the batteries to operate individually with brigades or in two's. Both reserve battalions were attached to Longstreet. Some corps had artillery chiefs, and some did not.

For the time being, the artillery would be deprived of the services of two newly appointed field officers, Majors Joseph Palmer and Robert Martin, although the reasons why they did not serve are cloudy. Palmer, the thirty-two-year-old former physician who had commanded a Georgia battery, temporarily departed the army. On September 5, W. H. Brown wrote in his diary: "Major Palmer told me he has been removed from command of his battalion, and does not know where he will be sent." Martin's whereabouts were also uncertain.[18]

During the marching and countermarching throughout September, Major Owens encountered the Fifth Company Washington Artillery. He had not seen his old friend Captain Slocomb since the latter departed Centreville, Virginia, in 1861 to return to New Orleans. On the evening of the fifteenth, Owens passed the camp of the Fifth Company, noting that "they are all eager to know what the four companies in Virginia are about."[19]

As Rosecrans's widely separate columns moved southward into Georgia, Bragg saw the opportunity to strike his opponent in detail. An attempt failed at McLemore's Cove, with Lieutenant Colonel Bondurant being wounded. Semple's battery became engaged in a twenty-minute duel at five hundred

Table 5. Confederate Armament at Chickamauga

Battery	Armament
Polk's Wing	
Cheatham's Division	
Carnes's Tennessee	Two 6-Pounders Two 12-Pounder Howitzers
Scogins's Georgia*	
Scott's Tennessee	Two 6-Pounders Two 12-Pounder Howitzers
Smith's Mississippi (Turner)	Four 12-Pounder Napoleons
Stanford's Mississippi	Four 3-Inch Rifles
Cleburne's Division	
Calvert's Arkansas	Two 6-Pounders Two 12-Pounder Howitzers
Semple's Alabama	Four 12-Pounder Napoleons
Douglas's Texas	Two 6-Pounders Two 12-Pounder Howitzers
Breckinridge's Division	
Cobb's Kentucky	Four 12-Pounder Napoleons
Slocomb's Louisiana	Four 12-Pounder Napoleons Two 3.8-Inch Rifles
Mebane's Tennessee	Four 12-Pounder Howitzers
Walker's Division	
Ferguson's South Carolina at Rome, Georgia	
Howell's Georgia	Two 6-Pounders Four 12-Pounder Howitzers
Liddell's Division	
Swett's Mississippi	Two 12-Pounder Napoleons Two 3.8-Inch Rifles
Fowler's Alabama	Two 12-Pounder Napoleons
Longstreet's Wing	
Hindman's Division	
Garrity's Alabama	Two 6-Pounders Two 12-Pounder Napoleons
Dent's Confederate	Six 12-Pounder Napoleons
Waters's Alabama	Two 6-Pounders Two 12-Pounder Howitzers

Table 5. *Continued*

Battery	Armament
Stewart's Division	
E, Ninth Georgia Battery (York)	Two 6-Pounders
	Two 12-Pounder Howitzers
Dawson's Georgia	Two 6-Pounders
	Two 12-Pounder Howitzers
Oliver's Alabama	Four 3-Inch Rifles
Humphreys's Arkansas	Two 6-Pounders
	Two 12-Pounder Howitzers
Preston's Division, Maj. William C. Owen	
C, Ninth Georgia Battery (Wolihin)*	
Peeples's Georgia	Two 12-Pounder Napoleons
	Two 24-Pounder Howitzers
Jeffress's Virginia	Four 10-Pounder Parrott Rifles
	One 12-Pounder Blakely Rifle
Williams's Reserve Battalion	
Baxter's Tennessee†	Two 3-Inch Rifles
Darden's Mississippi	Four 12-Pounder Napoleons
Kolb's Alabama	Two 6-Pounders
	Two 12-Pounder Howitzers
McCants's Florida	Three 6-Pounders
	One 10-Pounder Parrott rifle
Johnson's Division	
Bledsoe's Missouri	Two 3-Inch Rifles
	Two 12-Pounder Howitzers
Culpeper's South Carolina*	
Robertson's Reserve Battalion	
Barret's Missouri	Two 6-Pounders
	Two 12-Pounder Howitzer
Le Gardeur's Louisiana‡	
Havis's Georgia†	Two 12-Pounder Napoleons
	One 3.8-Inch Rifle
Lumsden's Alabama†	Three 12-Pounder Napoleons
	One 12-Pounder Howitzer
	One 10-Pounder Parrott Rifle
Massenburg's Georgia†	Two 10-Pounder Parrott Rifles

*Armament not known; assumed four guns.
†Complete armament not known; assumed four guns.
‡No other mention is made of this battery; assumed a detachment that served with another company.

yards. As the enemy battery withdrew, Hotchkiss ordered Semple to again open fire. Upon investigation, it was found that two caissons had received a direct hit, with seventeen horses and several men dead on the ground. Semple reported one man wounded and one horse killed. Bragg now hurried to concentrate his army, as did Rosecrans. On September 18, on the eve of battle, no one could find Robertson's reserve battalion. Although it was supposed to report to Hindan's division, scouts could not locate it that morning. By the time it was finally found, Polk had changed orders and directed that it report to Cheatham's division, which was on the Long Hollow Road and in the direction of Lee & Gordon's Mill. The battalion consequently spent the entire morning floundering about on back roads. Around noon, it came on Bushrod Johnson's division and remained with it for the balance of the day.[20]

Johnson ran into stiff opposition from Federal cavalry east of Reed's Bridge over Chickamauga Creek. Just as he formed a line of battle, the eight guns of Robertson's reserve batteries reported for duty. Ironically, one of the brigades in the division had just arrived from Virginia and was commanded by Robertson's father, Brigadier General Jerome Robertson. Father and son would eventually reunite, but for now there was business at hand. In an attempt to jolt the blue horsemen loose, the major unlimbered four of his pieces and, along with a section from Everett's battery, opened fire. (Everett was down to three guns, one having had an axletree break the day before.) As the troopers fell back, the Twenty-third Tennessee stormed over the bridge. A section of the Chicago Board of Trade Battery opened on the bridge, but a section of Bledsoe's battery quickly silenced it.[21]

To the south, at Alexander's Bridge, Liddell's division encountered the carbine-toting mounted infantrymen of John Wilder's brigade, backed by four guns of the Eighteenth Indiana Light Artillery. Fowler's Alabama Battery attempted to unlimber, but the galling fire dropped two of his horses and scattered his men. Gunners rolled one piece closer to the creek, but it became impossible to man it. Swett unlimbered two Napoleons and two James rifles on an elevation, firing three or four rounds. The enemy battery and horsemen eventually withdrew, but not before destroying the bridge.[22]

By the night of September 18, both armies blindly faced each other along the banks of Chickamauga Creek, about twelve miles south of Chattanooga. Bragg's army was concentrated primarily on the west bank from

Reed's Bridge to Dalton's Ford. He decided to interpose his troops between the Union left and Chattanooga. Both sides groped about in the thick woods, not knowing the precise location of the other, but realizing that a clash would inevitably take place the next morning.

At seven thirty on the morning of the nineteenth, a Union brigade of John Brannan's division blundered into the Confederate concentration on the Reed's Bridge Road. Initially, the brigade encountered only Nathan Bedford Forrest's cavalry, supported by John Morton's Tennessee Battery and one gun of A. L. Huggin's Tennessee Battery. The five guns unlimbered in front of the dismounted cavalry—Forrest's favorite artillery style—and slowed the Union advance. It happened to be Morton's twenty-first birthday. He had been presented with a new uniform, which he had neatly packed away in a wagon. He would later learn, to his chagrin, that it had been gnawed by a mule.[23]

After pushing Forrest aside, Brannan encountered two brigades of S. R. Gist's division. These troops advanced with the Rebel yell, but were in turn driven back by Union reinforcements. In seesaw fashion, the Federal right flank was now hit by St. John Liddell's newly arrived division, which sent the Yankees reeling with the loss of two batteries. Liddell was then checked by the counterattack of a third Union division, under Richard Johnson, in which both batteries were retaken.[24]

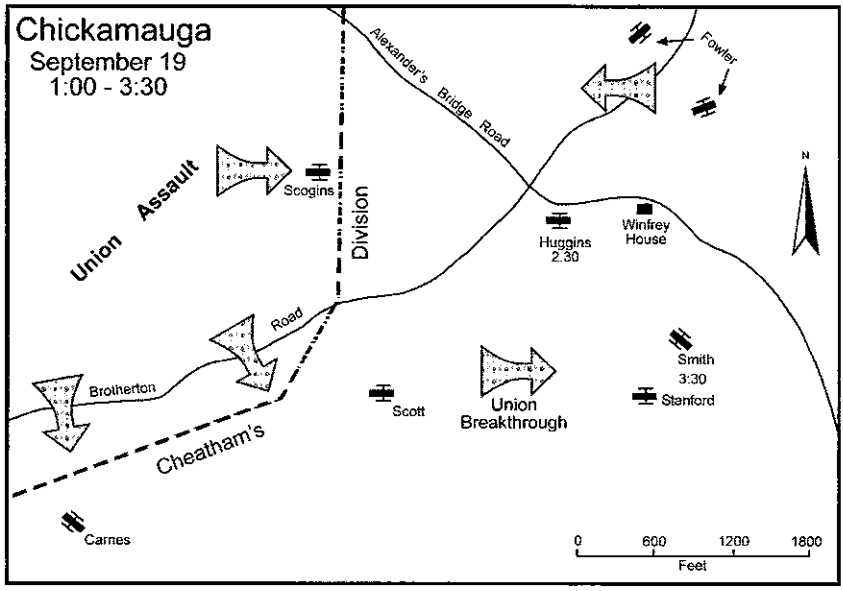
Because of the thick forest terrain, the Southern artillery was only minimally engaged during the morning assault. "Owing to the nature of the ground, and the rapidity with which the brigade advanced, I found it impossible to get the battery into position to render assistance," noted Lieutenant Harvey Shannon, commanding Swett's battery. Captain W. H. Fowler likewise admitted that the service of his Alabama battery was "necessarily limited, because of the character of the field where we operated was so badly adapted to the use of light artillery."[25]

Far to the south, at Glass's Mill, a small but vicious artillery duel did occur in the late morning as Ben Helm's brigade of Breckinridge's division crossed Chickamauga Creek. Three of Slocomb's guns and two of Cobb's, all under Major Graves, provided support. The infantry soon encountered John Beatty's Federal brigade, during which Graves's guns slugged it out with Bridge's Illinois Battery. The Illinois gunners were bested, losing eleven

men, a dozen horses, and a disabled caisson. They did get off one good shot, however, scoring a direct hit on one of Slocomb's gun crews, killing four by the explosion and injuring one as a limber careened out of control. Graves repositioned his guns as the Federals brought up reinforcements. The major now found himself up against nine Federal guns (Bridge's six and three from M, First Ohio) at seven hundred yards. A thirty-minute exchange erupted, called by one Rebel "the wickedest artillery duel . . . I ever saw." Graves eventually broke off the engagement and proceeded up Chickamauga Creek with the division.[26]

At eleven o'clock Cheatham's veteran division, six thousand bayonets, accompanied by Smith's artillery battalion, arrived on the field on the Confederate right. The four brigades crashed through the thickets toward the Brotherton Road, but as they did so they drove the Federals back on earthworks hastily prepared the night before. The fighting went back and forth, "the enemy giving way very stubbornly, and sometimes making us give way," Captain Thomas Stanford reported. Receiving reinforcements, the bluecoats drove Cheatham's division back and enveloped his unsupported flanks. As the Rebels reeled, they left several of their batteries in exposed positions. Many horses in Scogin's battery got caught in a crossfire, forcing the Georgians to abandon one gun and a caisson. Scott's battery "opened fire on the enemy with spherical case and canister at a distance of 300 to 400 yards with effect," Lieutenant A. W. Watson reported, although one of the howitzers became disabled after the second round, caused by a broken cap square. The battery withdrew, but not before losing three men killed, thirteen wounded, and fourteen horses disabled.[27]

W. W. Carnes's battery came up on Cheatham's far left. While awaiting instructions, three of the Tennesseans were shot off their limbers, causing the captain to take matters into his own hands. He unlimbered his guns on the left of Marcus Wright's brigade, which was now hastily retiring with the Federals close on their heels. As soon as the Thirty-eighth Tennessee cleared, the gunners opened with a dozen rapid salvos, sweeping their front. Lieutenant L. G. Marshall, commanding the left section, swung his two pieces to the left, just as the Seventy-ninth Indiana edged to within musket range and began picking off his horses. "Captain, if ever there was an occasion for the double-shotted canister we've carried so long, this seems to be the time," Marshall exclaimed. The cannoneers held their ground, but so did the Hoo-



siers. At two o'clock, Carnes, fearing that he would be engulfed, ordered off a 6-pounder, but all the horses of the limber fell dead in a heap. The captain shouted, "We can't save the battery; let the men leave as quick as possible." As Carnes galloped away, his horse was hit five times, eventually stumbling to the ground. The sergeant of the last gun shouted, "Hurry up, Captain, I can see them in our rear now." The bluecoats swarmed amid the debris—forty-eight horses killed or disabled and twenty-three artillery casualties. The battery had been wrecked. The bluecoats chopped up the limbers and carried the gun carriages some 150 yards toward their lines.[28]

The artillery faced pressure elsewhere along the line. Major General Alexander P. Stewart's division marched from west of Thedford Ford to the Confederate right, where Cheatham's battered division barely held its ground. Remaining at the ford was Major Samuel C. Williams of the reserve battalion of Buckner's corps, with Kolb's Alabama and Darden's Mississippi batteries. At two o'clock they came under a severe artillery fire that dropped both men and horses. Williams's guns stood silent, however, because his fuses were so uncertain that he dared not fire over the heads of his own infantry support.[29]

At two thirty, with Cheatham's division in trouble, Stewart's "Little Giant" division burst from the woods on Cheatham's left, wrecking the Union center and recapturing Carnes's guns. The graycoats knifed through an impressive array of Union artillery on the Lafayette Road, south of the Brotherton House, capturing two pieces and penetrating to the Glenn-Kelly Road before being checked by a fresh Union division (James Negley's). Brigadier General Henry Clayton's brigade fell back past the Lafayette Road in disorder. John Humphreys's First Arkansas Battery could not fire for fear of hitting their own men coming back in small parties. The battery was left with two wrecked limbers, a dozen disabled horses, and no infantry support, causing them to leave one gun in a no-man's-land, although it was later retrieved. William Bate's brigade, on Stewart's right, was blasted by twenty guns (including some of the same batteries that had escaped on the Lafayette Road) at the Poe House. One of Cheatham's batteries, Stanford's, accompanied Stewart's infantry but came under "a perfect hail of minnie balls and shells," related one of his men. "We counter-marched in double-quick time. Capt. Stanford said to stay would mean death to the entire battery in 5 minutes."[30]

On Cheatham's right, George Maney's brigade, supported on the flank by Colonel George Dibbrell's small cavalry brigade, cracked under the weight of three Union brigades. Captain Huggins's battery of horse artillery, on the Alexander Bridge Road west of the Winfrey House, slowed the Yankee surge with canister blasts. Eventually they withdrew—"we had to get away as soon as possible," recalled Huggins, losing one gun in the process. Maney's men ran pell-mell past Turner's four Napoleon guns, leaving the Mississippians to fend for themselves. Cheatham, standing with Turner, shouted, "Now, Lieutenant!" The gunners raked the advancing Federal line with double-shotted canister at sixty yards. One source estimated that three hundred bodies piled up in Turner's front. Cheatham promised that Turner would be a captain, concluding, "Had it not been for that battery, the Yankees would have been over this country tonight."[31]

Twilight approached as Pat Cleburne's division replaced Cheatham's and Liddell's and moved to the attack under orders of Polk. At six o'clock the gray infantry line groped forward. Hotchkiss's battalion followed in the rear of Cleburne's center brigade, S. A. M. Wood's, as it encountered a hot fire while crossing Winfrey Field. Johnson's and Brannan's Federal divisions fell

back toward the Lafayette Road (where they had planned to withdraw even if Cleburne had not attacked), offering stubborn resistance as they retreated. Semple's battery passed through the infantry and "opened fire to the front on the line of the enemy, only a short distance from us, guided entirely by the flash of their guns in the darkness," Lieutenant Richard Goldthwaite reported. Hotchkiss fell wounded and left the field, with battalion command going to Captain Semple. Lucius Polk's brigade on the right advanced farther into the darkness, causing Semple to oblique his guns left for fear of hitting them. The Alabamians expended about twenty rounds in this position, losing four wounded and several horses killed and disabled. To their left, the Texas Battery "gained a position in eighty yards of the wall [barricade] and opened with two pieces. I took 'Sallie' [gun named for Sally White] alone and by main strength mounted her within the fort," Captain James Douglas explained to his wife. Despite the fierceness of the attack, the Southerners proved unable to break the enemy hold on the road.[32]

During the night, both armies rearranged their dispositions so that Polk now commanded the right wing (five divisions) and Longstreet, who arrived at eleven that evening, commanded the left (six divisions). The attack the next morning would be made in echelon from north to south.

Throughout the morning of September 20, Polk prepared to assault. At ten o'clock Breckinridge's division struck toward the Lafayette Road. Two of his brigades seized the road and then wheeled to the south and smashed the Federal left in the area of the Kelly Farm. The Washington Artillery advanced sixty yards in the rear of Daniel Adams's Louisiana brigade, the battery unlimbering south of the McDonald House. "We drove them off, limbered to the rear, and moved across the orchard and took position beyond the ravine," Captain Slocomb reported. "The enemy here [west of the Lafayette Road] opened a heavy artillery fire upon us, which was returned, Adams' brigade charging them as their fire was silenced." Suddenly, a shrapnel shell exploded near Slocomb and Major Graves, mounted side by side. Slocomb's horse collapsed as Graves leaned over on the captain. The twenty-five-year-old major had taken a fragment in his bowels, leaving him mortally wounded. As some of the cannoneers gathered around him, Graves said, "Boys, I know you think that I prefer my old battery to yours. It is not so. There is none that I admire and love more than yours. I wish a detail of

your boys to carry me off and to remain with me until I die." Death would come the next day in a makeshift hospital.[33]

Receiving no reinforcements, Adams's brigade and Marcellus Stovall's east of the road fell back, pursued by the Federals. The Louisianians attempted to rally in a ravine in the rear of the Washington Artillery. The Federal artillery now zeroed in on Slocomb. "I was soon subjected to a terrific fire from the enemy's batteries in front, right, and left," he wrote. After a punishing half-hour stand, the battery withdrew. The New Orleans redlegs lost four killed, sixteen wounded, and thirteen horses disabled in this single position.[34]

Cleburne's division, on Breckinridge's left, was now thrown into the meat grinder. For nearly an hour, the Confederates recoiled as repeated assaults were repulsed against log barricades. As Douglas's battery moved up through the fallen timber, it came under a dangerous flank fire and withdrew. Calvert's battery unlimbered in support, but a Federal shot quickly disabled a howitzer. Goldthwaite's men rolled one section on the crest of a hill, firing until they depleted their ammunition. They withdrew with the loss of ten men and two horses.[35]

Around noon, Walker's corps replaced Breckinridge's and Cleburne's shattered brigades. The renewed attack was poorly handled. The fresh divisions butted against the old Breckinridge-Cleburne front in brigade-size attacks. Swett's and Fowler's batteries advanced, but were hardly engaged, the last coming under a sustained fire that made his position untenable. Cheatham's division, bloodied from the previous day, remained out of the action. By mid-afternoon, Polk's wing had made no headway in seizing the Lafayette Road and had sustained 30 percent casualties.[36]

A lull occurred around eleven in the morning as Longstreet prepared a massive column to attack the Union center. Six divisions, some twenty-three thousand men, stood poised astride the Brotherton Road. Exactly how many guns were available is difficult to ascertain. Longstreet had eleven batteries with forty-six guns assigned, but discounting disabled pieces, the number available probably totaled about forty-two. Williams's reserve battalion (three batteries of eleven guns) would bring the total to fifty-three.

From the outset, the artillery was mishandled. Apparently only one battery (Everett's) moved out with the attacking force. Sheer negligence was partly to blame. Neither of Bushrod Johnson's batteries (Bledsoe's and Cul-

peper's), "for reasons unknown to me," declared Johnson, followed their brigades into action. Dawson's battery was still refitting from Stewart's abortive attack a half hour earlier. When Bate's brigade advanced, the Eufaula Light Artillery "remained in position," according to its captain. Williams's battalion followed Preston, but that division was not initially committed.[37]

Although the terrain was partially to blame, a faulty organizational structure proved the most significant shackle. The battalion as tactical unit was almost totally ignored, as batteries followed their assigned brigades. Of most note, the only occasion in which the artillery would exert any measurable effect during Longstreet's attack was when Williams's battalion was committed as a unit.

The juggernaut commenced at eleven o'clock. In a scene that Bushrod Johnson described as "unspeakably grand," the Confederates swarmed past the Brotherton farm. They soon discovered a hole in the Union line, caused by the premature shifting of a Federal division at precisely the moment of the attack. Rosecrans's entire right wing collapsed under the pressure, sending the panic-stricken Federals toward McFarland's Gap. Numbers of guns (Johnson's division alone counted nineteen pieces) and thousands of prisoners fell into Confederate hands. Hoping to blunt the onslaught, the Federals collected some twenty-nine guns in the northern portion of Dyer Field. Such massed firepower had saved the Army of the Cumberland at Stones River; perhaps it could again. Captain Culpeper, who finally got his South Carolina battery up, came under the fire of these massed guns. "The enemy's batteries seemed to concentrate their fire on us here," noted Captain Culpeper. "For a short time it was terrific; I had a limber chest exploded here by [an] enemy's shell, which explosion fortunately did not injure a single man, though we were firing at the time." Chickamauga was not Stones River. The Confederate line rolled over the eight Yankee batteries, capturing a staggering fourteen guns.[38]

By one thirty Longstreet's divisions approached the Dry Valley Road, only a few miles from McFarland's Gap. The three guns of Everett's battery (E, Ninth Georgia Artillery Battalion) and six of Dent's dropped trail north of the Hiram Vittetoe House, on the southern edge of Horseshoe Ridge. There they opened fire on Federals escaping to the north, the exploding shells causing great consternation. An enemy battery attempted to establish counterfire, but Everett's men made quick work of it, disabling one of their

pieces. Southern infantry moved ahead, capturing three guns and seven caissons.[39]

By late afternoon, the Federal position had evolved into two concentrations. The first was in the Kelly Field sector, where brigades were being precariously withdrawn north on the Lafayette Road. Major Thomas Porter placed Williams's battalion at the Poe House, south of the Federal position. At four o'clock Williams's guns opened fire at a range of one thousand yards and continued the pounding for forty-five minutes, taking Colonel William Grose's brigade completely in reverse. The fire "in a few minutes completely enfiladed our rear," remarked a Union officer. Major Porter boasted that Williams's guns demonstrated "great execution."[40]

It has been suggested that two of Robertson's reserve batteries assisted Williams, but the Texan's precise role seems vague. Although his After Action Report is missing, his battalion statistical table reveals that seven of his twenty-one guns never fired a shot. His remaining fourteen guns expended only 151 rounds during the two-day battle. Years later, a member of the battalion recalled that Robertson on the twentieth took great pains "not to expose us unnecessarily," and even the men who detested the pedantic young officer conceded that "he takes care of us."[41]

The Eufaula Light Artillery, positioned east of Kelly Field, gave Brigadier General Charles Cruft's Union brigade a difficult time as it retired to the woods west of the road. One Rebel shot made a direct hit on a caisson wheel in Battery B, First Ohio Light Artillery, hurling the caisson high in the air before it crashed to the ground. Battery A, First Ohio Light Artillery came to the aid of their hard-pressed comrades by directing counter-battery fire.[42]

As the Confederate assault column swept past the Glenn-Kelly Road, a Union brigade got in their rear. Captain Culpeper explained the scene:

> Our infantry were considerably in advance of us and I was preparing for a forward movement by a road just to my right, when I saw an artillery officer coming down the Chattanooga [La Fayette] road at full speed. That officer said to me excitedly, "The enemy's coming down the road! There's no force to oppose them! Will you not go at once and fire on them? I am Maj. Robertson commanding a battalion of artillery. If you go, I will send you two guns to assist you." The importance of the movement was obvious, and I at once

proceeded rapidly up the Chattanooga road and went in battery in Poe field 20 or 25 yards south of the house and west of the road. Here I expected to be confronted by an advancing enemy with none to oppose his progress except my own little command, but to my astonishment I could not see a living soul, yet there was, or soon was, a slow fire of small arms from the woods north of us as from a line of skirmishers. Two long rifled cannon, without limbers abandoned by the enemy were just to my left in [the] southwest corner of Poe Field. The Confederate dead to my right and front marked well the line to which the troops to my right had just advanced and retired, or it may be, the line up from at which the enemy ceased to fire on them. I had not been in this position very long, when troops came in my rear and formed in the edge of woods south of Poe Field.

Gen. Law's troops near [the] southwestern angle offield westerly and a little inclined to the rear and south. Gen. Law was now at my position for the purpose of observation, he told me. Suddenly I heard a cry out to the infantry near me (not his own men), "Fire into that flag," pointing to the woods north of us. The infantry wavered and seemed much confused. I then fired about (5) five rounds to the piece. The slow fire from the woods north of us ceased, and no artillery replied to my shots. A section of ten pounder Parrott guns of Major Robertson's battalion reported to me here and remained the rest of the day.

Soon Lieutenant General Longstreet appeared in Poe Field and ordered the battery considerably north of the house and east of the road, saying to "shell the woods. The enemy are reinforcing their right."[43]

Liddell's division swung around the Federal left and came close to blocking the vital Lafayette Road, the escape route to Chattanooga. Before the troops came into position, however, John B. Turchin's Federal brigade attacked up the road, striking Liddell in flank and nearly routing him. Two batteries, Swett's and Fowler's, had already unlimbered. The stunned cannoneers watched in horror as a line of blue rushed toward them. "For the first time during the war, they [drivers] seemed to lose their heads," recalled Swett. "They dashed off, disregarding my command to turn to the left,

though I was close to the front driver, and kept up, giving the command several times." One of Fowler's dead horses blocked the road, and it appeared as though both batteries would be lost, but the infantry drove back Turchin's troops long enough for the guns to escape. Seeing Swett down the road, Brigadier General Liddell anxiously exclaimed, "My God, where is the artillery?" He breathed a sigh of relief to hear that it had escaped.[44]

The major Union concentration was on Horseshoe Ridge, where the Yankees held firm despite repeated assaults. Apparently only three batteries—Everett's and Dent's near the Vittetoe House and Garrity's in the center of the Confederate line—were engaged. The terrain was partially to blame. William Preston noted that in the attack on Snodgrass Hill, "no artillery could be used by us effectively." Yet, a good chance was missed by not massing guns diagonally across the Glenn-Kelly Road, just south of the Vittetoe House, to enfilade the Union left. Exactly where Bledsoe's and Culpeper's batteries and Leyden's battalion were at the time is not known.[45]

In the late afternoon, Steedman's Union division hurried to assist its comrades on Snodgrass Hill. Moving from Rossville Gap down the Lafayette Road, Forrest's cavalry, guarding the Confederate right flank, moved to intercept. He placed his artillery (Morton's, Huggins's, and Huwald's batteries), as well as a borrowed Napoleon section from Cobb's battery, on a ridge parallel to and six hundred to eight hundred yards from the Lafayette Road. The thirteen guns drove the Federals off the road as Forrest's dismounted troopers advanced. Suddenly Forrest saw his thin line charged by a heavy force of infantry. The batteries, which had been ordered to advance, got no farther than the road before they withdrew to their former position and opened a destructive fire at short range. To avoid Forrest, Steedman's troops left the road, passed through the Mullis Farm, and arrived on the Federal right just in time to check several determined assaults.[46]

At five thirty, Major General George Thomas, the ranking Federal officer on the field, made a withdrawal with his remaining troops. Three regiments, about 550 men, were sacrificed, but the rest of the column escaped under cover of darkness. Bragg made no effort at pursuit.

The contribution of the Confederate artillery at Chickamauga proved disappointing, especially considering that more guns had been fielded than at any other time. The rugged, heavily wooded area of northern Georgia was

simply not artillery country. "As most of the ground over which the battle was fought was very thickly wooded, we could not see more than 300 yards to the front, and consequently could very seldom use artillery," explained Major Porter. Captain Stanford remarked that the terrain "would not permit the use of artillery, and especially a rifle battery."[47]

The statistics confirm the artillery's relatively minor role. Despite the enormous casualties sustained by the Confederates (26 percent of the army), a modest 41 artillerymen were killed and 155 wounded, or 6 percent. In addition, 231 horses had been killed or disabled. Four batteries never fired a shot.[48] See table 6.

Bragg later spoke of the unusually heavy loss of artillery horses, estimating that a third of his animals were killed or disabled. This was one of the reasons he advanced for not vigorously pursuing the enemy. The actual numbers do not support this. The batteries reported losses of only 231 horses, whereas Rosecrans lost more than 600. The paltry expenditure of ammunition was yet another indication of the artillery's limited participation. The batteries reported an expenditure of 4,568 rounds fired, or an average of 32 per gun, or 42 per gun actually engaged. This compares with the Confederate expenditure at Gettysburg of 22,000 rounds, or 150 per gun.[49]

Some of the ordnance simply failed to work under combat conditions. Major Williams reported that three-fourths of the shells fired by his battalion failed to explode. Artillery officers in Breckinridge's division complained of "perfectly worthless friction primers." A howitzer in Scott's battery was placed out of service when the cap square broke. No less than four gun carriage trails broke (one each in Havis's and Lumsden's batteries and two in Peeples's) as the guns recoiled. A howitzer in Everett's company was disabled when the axletree broke, and three howitzers in Martin's battery were disabled when the limber poles snapped. Yankee marksmanship also took a toll: three 12-pounder howitzers, two 12-pounder Napoleons, one 6-pounder, and one 3-inch rifle received hits.[50]

Despite the artillery's marginal performance, Chickamauga was still a Confederate victory, and, as such, the spoils went to Bragg. Included were thirty-nine fieldpieces (six 6-pounders, six 12-pounder howitzers, four 12-pounder Napoleons, one 12-pounder mountain howitzer, six 3-inch rifles, seven 10-pounder Parrott rifles, and nine 3.8-inch rifles), twenty limbers, thirty caissons, one battery wagon, 156 single sets of artillery harness, and

Table 6. Artillery Losses at Chickamauga

Unit	Casualties	Horses Lost	Time Engaged	Rounds Expended
Bledsoe	1 K, 1 W		1 Hr.	125
Martin	3 K, 4 W	6	3 Hrs.	102
Peeples	3 W	11	10 Hrs.	69
York	3W	5	10 Hrs.	428
Swett	2 K, 9 W	11	50 Min.	105
Semple	10 W	7	4½ Hrs.	220
Douglas		3	2 Hrs.	130
Calvert	6 W	4	3 Hrs.	243
Cobb	3 K, 7 W	5	2¼ Hrs.	150
Slocomb	11 K, 22 W	20	3 Hrs.	682
Mebane	1 W	8	15 Min.	76
Jeffries		3	6 Hrs.	67
Kolb	1 W	4	5 Hrs.	66
McCants	1 W		35 Min.	85
Baxter			1 Hr.	13
Darden	1 K, 2 W	10	55 Min.	99
Eufaula	1 K, 13 W	15	30 Min.	76
Dawson	Not Engaged			
Humphrey	Not Engaged			
Massenburg	4 W	1	1 Hr., 20 Min.	58
Lumsden	1 K, 1 W	8	1¼ Hr.	58
Havis	1 K, 1 W	2	1 Hr.	34
Barret	Not Engaged			
Scott	2 K, 14 W	16	2 Hrs., 20 Min.	146
Dent	3 K, 13 W	8	6 Hrs.	322
Waters	Not Engaged			42 (Blown Up)
Garrity	1 K, 5 W		40 Min.	23
Stanford	4 W	4	1 Hr.	103
Turner	2 K, 5 W	4	1 Hr., 20 Min.	220
Carnes	7 K, 16 W	48	No Report	
Fowler	No Report			

about 2,100 rounds of ammunition. A few batteries swapped out captured pieces on the field: Peeples's two 24-pounder howitzers for Napoleons, Eufaula one 3-inch with a 10-pounder Parrott rifle, and Bledsoe two 3-inch rifles and two 12-pounder howitzers for four U.S. 3-inch rifles. Most of the captured pieces, however, went by rail to the Atlanta Arsenal.[51]

9
Artillery Disaster at Missionary Ridge

Lieutenant Andrew Neal of McCants's Florida Battery jubilantly wrote that the Southerners had "whipped the Yankees badly" on the banks of Chickamauga Creek. "We have only to press them to reap the victory." Forrest's cavalry pushed to the outskirts of Chattanooga, and Morton's horse battery commenced shelling one of the forts. Bragg, however, remained convinced that he had not won a victory. Not until the morning of September 23 was the army given orders to march and the sound of artillery rattling over the twelve-mile road to Chattanooga heard. Meanwhile, Rosecrans's battered army threw up a strong defensive line around the southern side of town. During the last week in September, Bragg established a six-mile semicircle southeast of town, with Longstreet commanding the left, Hill the center, and Walker the right. As Sergeant John Snow of Lumsden's battery "rode over the [Chickamauga] battlefield," he saw numerous "dead bodies . . . lying in the broiling sun, and their faces as black as ebony, and they were just beginning to bury the dead."[1]

Bragg decided to invest the town and starve the beleaguered Federals into submission. Rosecrans's army could be supplied by water, rail, and road. His primary supply routes—the Tennessee River, the Nashville & Chattanooga Railroad, and the south bank wagon road—all merged together at the base of Lookout Mountain. Bragg recognized that if a row of cannon could be established across the summit, the supply routes around Moccasin Bend could be effectively blocked. Thus the mission of the artillery: cut the Union jugular.

Colonel Edward Porter Alexander's artillery battalion of the Army of Northern Virginia rolled into Ringgold Station during the early morning

hours of September 25 after a grueling seven and one-half day journey from Virginia. It comprised one Louisiana and five Virginia batteries, one each of 20-pounder Parrotts, 10-pounder Parrotts, 3-inch rifles (U.S.), 12-pounder Napoleons, and 12-pounder howitzers. The horses had been left behind in Virginia, so others would have to be found. Alexander was not impressed with the Army of Tennessee. Concerning the western long arm, he found the organization imperfect, the fixed ammunition of poor quality, and the guns of inferior quality.[2]

Alexander learned on September 29 that an assault would be made on the Federal outer works. "I distributed them [batteries] where I thought they would do the most good. I recall [Captain George] Moody's position, with his six 24-pounder howitzers, in a hollow to the left of the road to Rossville, where I put him on skids to give a mortar fire into a quite formidable fort," the colonel noted. The attack was subsequently and, considering the terrain, fortunately cancelled, but not before Captain Moody, practicing his mortar fire, fell from a slight wound as the enemy returned fire.[3]

As the enemy lines constricted, Longstreet assumed command of the Lookout Mountain sector. Hauling artillery up the small mountain to the summit proved difficult. Mules and skids were used for the heaviest guns. Work had to be done at night, because the trail was commanded at several points by Federal batteries on Moccasin Point. Huge boulders protected the gun crews from a Union cross fire. Twenty long-range pieces and a few howitzers eventually crowned the mountain. The last had their gun carriage trails sunk deep in the ground so that they might be used as mortars.[4]

From atop the fifteen-hundred-foot lofty eminence, Rebel gunners held a sweeping panoramic view of the bend in the Tennessee River and the Federal camps in Lookout Valley. Beginning September 29, Alexander's guns vainly lobbed shells into the Federal encampment below, the sound reverberating throughout the valley. Even with muzzles depressed to the utmost, the angle was simply too steep, causing most of the rounds to overshoot. To eliminate a particularly spunky Federal battery dug in directly below the mountain, Alexander had the trails of some of his guns propped up in an attempt to smash it with percussion shells; the attempt failed.[5]

Federals letters attest to the ineffectiveness of the sporadic cannonading. "There is a little Artillery fighting every day," a Michigan cannoneer revealed on November 3. "Yesterday some of the Rebs shot came into town

from Lookout Mountain, a distance of nearly four miles, but as yet they haven't done any damage." Two days later he wrote: "Artillery is thundering away this morning. Some from the top of the mountains & some of our guns, but we do not notice it any more. It's an everyday occurrence. . . . As yet, the enemy's guns from the mountain haven't done any damage, neither can they from that elevated position. They shatter some buildings, but that loss is their own. The town does not belong to us." The Federal battery on Moccasin Point actually had the capability of returning fire (one shot narrowly missed Bragg), but, according to a Virginia cannoneer, "they did not seem to know that they could reach us and seldom or never replied."[6]

The artillery experienced other problems. One of Bragg's best rifle pieces, a 20-pounder Parrott in Massenburg's Georgia Battery, burst at the muzzle on the second day of the siege, wounding two artillerymen. Poor rifle shells often failed to explode on impact. Before the siege concluded, Alexander's three 20-pounder Parrotts depleted their supply of shells. A 24-pounder siege gun brought up from Atlanta and placed on the right flank proved ineffectual. "They are too well posted to be shelled and this business is all foolishness," complained a disgusted artilleryman.[7]

Major Felix Robertson convinced Hallonquist to go to Bragg and get permission for a dangerous sortie. By night, two batteries of the reserve quietly moved down to the riverbank and positioned directly across from an enemy camp. At dawn, when the Union bugler sounded "Reveille," Robertson shouted for his camouflaged batteries to fire. Guns burst forth in a thunderous salvo, but before they could reload the Federal artillery blasted a reply, killing and wounding several men and horses. Robertson limbered up his pieces and whirled off into the woods. "How Halinguist [sic] and Major Robertson ever reconciled [to] General Bragg the disastrous result of their little pleasure trip I never knew," recalled a disgusted Georgia gunner.[8]

Although the Confederate artillery failed to inflict significant damage during the month-long siege, the presence of artillery crowning the mountain heights, coupled with cavalry raids in the rear, reduced the flow of supplies to Rosecrans's army. As the days ticked away, the Federals became desperate for provisions. An estimated ten thousand horses and mules died, immobilizing their artillery.

Bragg encountered problems of his own. During October, his army experienced a severe shortage of corn and long forage. A lieutenant in Darden's

battery warned that "for the want of forage my horses are rapidly falling off." Captain J. T. Humphreys informed his division artillery chief that "during the past five days I have received seventy-nine bushels of corn and no hay to feed seventy-five horses and twenty-five mules. During October, half of the artillery horses had to be removed to the rear to feed on grass. A soldier-correspondent of the *Memphis Appeal* wrote of the near "criminal neglect" of some of the artillery horses. Some battery commanders had shelters built for the animals, but problems persisted. "You will be astonished to hear that the horses in the artillery service, the most important in the whole army, are the most neglected—a fact, however, which quartermasters, and even artillerists, seem incapable of comprehending."[9]

Wheeler's October raid also turned disastrous. His highly touted destruction of a wagon train at Anderson's Crossroad in the Sequatchie Valley in fact destroyed 350 vehicles, not the 800–1,000 claimed. In the two days of rearguard fighting that ensued, many of the captured mules were retaken. Wheeler then suffered a serious defeat west of Shelbyville and was driven back into northern Alabama. Two of Wiggins's 12-pounder howitzers, having broken down several times, had to be abandoned, and an iron gun and its limber in White's battery exploded, although Wheeler added that the piece had been previously condemned.[10]

Morale plummeted throughout late October and early November as heavy rain turned to sleet. More than a fourth of the men in the Washington Artillery received furloughs for sickness in November. W. R. Montgomery of Rowan's battery hoped that a rumor of his battery's return to Mobile would turn out to be true; it did not. He desired to get away "from under General Bragg for I . . . do not like him." Poor weather and washed-out bridges led to a shortage of rations. "We get nothing but 1 lb. of cornbread meal unsifted & same quantity of beef," Lieutenant Neal wrote on October 12, adding that "the company complain but little but they certainly have a harder time than they have ever seen."[11]

Bragg's grip on the Union breadline turned out to be fleeting. During the early morning hours of October 27, a Federal expedition brushed aside token resistance and secured Brown's Ferry, an upriver position outside of Rebel artillery range. A new supply line to Bridgeport, Alabama, soon opened. Bragg considered attacking Joseph Hooker's two corps in Lookout

Valley, but the road leading down into the valley proved too steep for cannon. Longstreet's batteries would need to make a detour of fifty miles, a move considered impracticable.[12]

Meanwhile, in early November, Bragg undertook the wholesale reorganization of his army—partially for efficiency but primarily to disperse the anti-Bragg element. Three corps were created under Longstreet (two divisions); Breckinridge (three divisions), who replaced D. H. Hill; and Hardee (four divisions), who took over from Polk. The long arm did not escape the shake-up. Each division received a battalion, but by the time numerous batteries were shifted about, several battalions only faintly resembled their former organization. Major Melancthon Smith retained only two of his five batteries. Major Williams's reorganized battalion went to Buckner's division and Leydon's battalion to McLaws's division of Longstreet's corps. Felix Robertson's reserve battalion remained intact, with Barret's battery receiving the remaining men of Sengstak's Alabama Battery, the detachment having been exchanged from Vicksburg. Lieutenant Neal expressed the sentiments of many when he stated: "I do not care to leave this [Williams's] battalion, as we have fought together and I know them to be good and excellent troops."[13]

Carter Stevenson's division, paroled and exchanged since the capture of Vicksburg, arrived and was assigned to Breckinridge. With the division came two Georgia batteries: John Rowan's and Max Van den Corput's, both temporarily armed with Yankee cannon captured at Chickamauga. Rowan received twenty-seven men as drivers, but neither company had horses by late September. Carnes's battery, badly crippled in the late battle, was also reequipped in early November, receiving four 12-pounder Napoleons and some additional men from Scott's Tennessee Battery. Still short of cannoneers, the battery remained temporarily out of service.[14]

Several new faces emerged on the field staffs. Captain Cuthbert Slocomb, despite his desire to remain with his Washington Artillery, temporarily replaced the deceased Rice Graves as Breckinridge's artillery chief. Captain Robert Cobb became acting chief of Stevenson's newly arrived batteries. Captain Henry Semple, having returned from furlough, served as A. P. Stewart's top artilleryman during the brief absence of Major J. W. Eldridge. Captain Fowler remained with his battery, although still weak from his bout of illness the previous summer.[15]

Bragg's reorganized long arm totaled forty-six batteries, comprised of 3,636 officers and men. The armament, minus the horse batteries, included 145 guns: twenty-two 6-pounders, twenty-eight 12-pounder howitzers, four 24-pounder howitzers, forty-eight 12-pounder Napoleons, twelve 10-pounder Parrott rifles, four 20-pounder Parrott rifles, nineteen 3-inch rifles, seven James rifles, and one Blakely rifle. The guns averaged 156 rounds apiece.[16]

Chief of Ordnance Hypolite Oladowski continued to push for better cannon. On October 7, Stanford's battery received four new Napoleon guns; they were "just from the foundry and had never been fired. They were splendid guns!" remarked W. H. Brown. In early November, Oladowski estimated that he required twenty-two 12-pounder Napoleons to replace the 6-pounders then in service. Late that month, he informed Colonel M. H. Wright at the Atlanta Arsenal that all of the 6-pounders used at Chickamauga had been repulsed by 12-pounder Napoleon guns. One battery of 6-pounders and 12-pounder howitzers, he noted, had been "entirely smashed and taken by the enemy." On November 12 four new government-made Napoleons arrived and were issued to Bledsoe's Missouri Battery. A week later, Bragg dispatched a special messenger to speed delivery of a battery of Macon Arsenal light 12-pounders.[17]

In early November, Eldridge's battalion, having returned from a foray to Cleveland, Tennessee, arrived at Chickamauga Station. At noon on the eighth, Henry Maddox and several boys from Stanford's battery had dinner with an old farmer. The man complained that some of his honey had been stolen by passing soldiers. Pretending to be an officer, Maddox placed "guards" so that no more would be taken. As the battalion proceeded on the next day, the irate farmer, along with his wife, three daughters, and two sons, suddenly appeared and demanded of Elridge that Stanford's wagon be searched. Stanford, oblivious of the problem, insisted that no honey would be found and that a search would prove fruitless. To his astonishment, not only his bucket but also his camp kettle had been filled to overflowing with honey. "The old farmer and the girls will always believe that Capt. Stanford and Lieut. McSwine had something to do with the stealing of 'dat air honey,'" mused George Jones.[18]

More serious matters soon came to the forefront. It became apparent that the Union army was undergoing a massive buildup. Bragg had known for some weeks that corps from William T. Sherman's Army of the Tennessee

were hastening from Mississippi, that three divisions under General Joseph Hooker had arrived from Virginia, and that the reorganized Army of the Cumberland was now commanded by General George Thomas. Furthermore, an intercepted dispatch revealed that Major General Ulysses S. Grant had arrived to take overall command. Reports of ninety thousand Federals in Chattanooga were not exaggerated.

In the light of this information, Bragg foolishly proceeded to reduce his force. On November 4 he dispatched Longsteet's two divisions (twelve thousand men) and five thousand cavalry under Wheeler on a hapless venture to wipe out Ambrose Burnside's isolated corps at Knoxville. Longstreet took Alexander's and Leydon's battalions, some thirty-five guns, with him. Although Wheeler took three of his four horse batteries, Longstreet was still not satisfied, arguing that all of the guns should be exchanged for rifles. On November 23, Buckner's three-thousand-man division entrained for east Tennessee. The division artillery, Major S. C. Williams's battalion, was later recalled to the Army of Tennessee and assigned to the reserve as a second battalion.[19]

Bragg had miscalculated. Grant did not reinforce Burnside as anticipated. Instead of relieving Union pressure on the Chattanooga line, Bragg now found himself with less than thirty thousand men confronting a far superior Federal force. Bragg's left was now defended by Carter Stevenson's division. A section of Howell's Georgia Battery unlimbered at the Craven House on the plateau below the craggy summit. Because the plateau was commanded by Federal artillery on Moccasin Bend, Howell's horses had to be left at the base of the mountain. In the event of a sudden reversal, it would be nearly impossible to remove the pieces.

Alexander's battalion on the top of Lookout Mountain was not gone. Stevenson assigned Garrity's lone Parrott battery to man Lookout Point. At one in the afternoon on November 24, it was relieved by a section of Napoleon guns from Van den Corput's battery. One glaring problem remained. In the event of an attack, the muzzles could not be depressed sufficiently to reach the base of the mountain. Brigadier General John Jackson's advice to sink the wheels and elevate the carriage trails went unheeded.[20]

A cold rain and heavy fog set the stage for the morning of November 24. At ten o'clock some ten thousand troops under Hooker smashed into Stevenson's line. Forty guns of the Army of the Cumberland, brought up by

Sherman's artillery horses and concentrated on Moccasin Point to provide coverage, now opened in a thunderous barrage. Van Den Corput's section attempted to respond, but the heavy fog shrouded the enemy's movement. "The longest fuse that I had with my guns was 7, which time would carry my shells only 1 mile. The position of the Federals being far over that distance, I did not open fire on them," Van den Corput wrote. By noon the shattered Confederate force had been pushed back past the Craven House and Howell's two 6-pounders captured. Using the signal corps as forward artillery observers, Van den Corput's gunners began shelling in the direction of the farm. The Federals soon came under the cover of the rocks, meaning that the guns could not be sufficiently depressed. Captain Carnes, watching from a nearby ridge, could plainly see the blasts of the guns through the fog. By two thirty the engagement was over, and Bragg ordered his troops off the mountain.[21]

In a night meeting with his corps commanders, Bragg decided to make a stand on Missionary Ridge. Hardee would command the right, where Sherman's army had crossed the Tennessee River and was massing troops in the vicinity of Tunnel Hill. Cheatham's and Stevenson's divisions moved to the right that night. Cheatham thus had four divisions in the sector: Patrick Cleburne's, Carter Stevenson's, W. H. T. Walker's, and Benjamin Cheatham's. This left Breckinridge holding the center and left of the ridge, nearly four miles in length, with the divisions of Patton Anderson, William Bate, and A. P. Stewart. Two regiments and Dawson's Georgia Battery held Rossville Gap.[22]

For the first time, the western artillery would be employed on the tactical defensive. At Shiloh, Perryville, Stones River, and Chickamauga, an attempt had been made to use it offensively, but with minimal effectiveness. From Bragg's perspective, Missionary Ridge appeared to be well suited for large-scale artillery operations. Attackers would have to cross a twelve-hundred-yard-wide plain swept by artillery fire. Bragg placed nearly all of his artillery, ninety-six pieces, on the crest of the ridge.[23]

Actually, Missionary Ridge presented serious engineering and geographical problems. The earthworks on the crest, not ordered by Breckinridge until November 23, were prepared too close to the edge. Consequently, the gun barrels could not be depressed sufficiently to cover the slope. An obtuse

angle was thus created with "A" representing the gun on the crest, "B" the foot of the ridge, and "C" a point about two hundred yards in front of the ridge base. The artillery would thus be delivering what Brigadier General William Bate termed a "plunging tire" between points A and C, thus creating a blind spot. To remedy this, the men could have placed some howitzers on the reverse slope. Indirect fire, rare during the Civil War, had been tried by Van den Corput's gunners on Lookout Mountain the day before. As it was, the Union infantry could clear the open plain within ten minutes, leaving little time for the artillery to do its work.[24]

The terrain also presented problems. Although the ridge was crisscrossed with small roads, hauling guns to the top proved no easy task. Young Lieutenant René Beauregard reported that the horses of his South Carolina Battery were so feeble that they could barely draw their guns to the top. Only by assigning a company of infantry to each gun and using ropes and pulleys were the pieces slowly drawn to the crest. Once there, the pieces could not be maneuvered easily. In the event of a sudden reversal, the only escape for some batteries would be to go careening down the reverse slope.[25]

The guns were also maldistributed, being sprinkled up and down the whole length of the overstretched line. Batteries, divided into sections and even single gun crews, unlimbered on commanding rises that were often hundreds of yards apart. Patton Anderson's division, for example, covered a front of nearly a mile, but only ten widely scattered guns came on line. The Federals massed a six-thousand-man division in that sector alone.[26]

To complete the list of errors, by the morning of November 25, much of the Southern artillery had still not taken position. Cleburne, anticipating a retreat the night before, had prematurely sent his artillery train across Chickamauga Creek. When he received word at midnight that a stand would be made, he hurriedly recalled his batteries. The battalion retraced its steps during the early morning hours of the twenty-fifth. Carter Stevenson's division, in the rear of the column, did not depart Chattanooga Valley until midnight. The batteries did not actually get into position on the ridge until noon of the twenty-fifth. A similar situation occurred on the left and center. Not until three thirty in the afternoon on the twenty-fifth did the Washington Artillery move up the ridge from the valley via Rossville. Dawson's battery did not unlimber until a quarter of four. Few batteries had protected works. Despite the army's presence at Chattanooga for two months, much

of the defense would clearly be a last-minute affair. Captain Stanford, commanding Stewart's division artillery, believed that his guns could have been positioned had he been given more time.[27]

Lieutenant John H. Bingham, commanding Douglas's Texas Battery, remembered the morning of November 25 as having a cold north wind with a bright sunshine. Cleburne's four thousand men held the north end of Missionary Ridge, north of Tunnel Hill. His line bent back in a crook formation, with Swett's four Napoleons in the crook and Key's and Goldthwaite's batteries on the knob above the tunnel. From the tip of the crook, Govan's brigade, supported by Douglas's battery, extended due east, parallel to the railroad. At ten thirty Bragg's fears of an attack were realized when Sherman hurled his Vicksburg veterans against Cleburne. Three times the Yankees charged up to the very muzzle of the guns, only to be driven back. Lieutenant Harvey Shannon, the thirty-two-year-old Vicksburg surgeon now commanding Swett's battery, was struck by a shell fragment that broke his collarbone, punctured a lung, and came out near the backbone. So many officers and sergeants fell as casualties that a corporal eventually took command. A detail of seven infantrymen hurriedly arrived to keep the guns operational.[28]

A lull came in the battle around noon. Cleburne ordered two of Shannon's Napoleon guns over to join Douglas's battery, because his pieces were "too light in their present position." Key's battery replaced Shannon's section, the six guns commanded by Key. The respite proved brief; at one o'clock the hill was again fiercely assaulted. The cannoneers spun the wheels of the elevating screws until the barrels were depressed to the utmost. "Shells from the Federal artillery were bursting on the ridge, and I saw one of them explode behind our lines, destroying several men," recalled Captain Key. "One soldier's head was blown into a tree, where the hair held it suspended on the limbs." The approaching Yankees soon focused their rifle fire on Key's gunners, forcing them to scamper for cover. As the charging Federals closed to within canister range, the Rebel cannoneers manned their pieces and unleashed canister tins that tore gaping holes in the surging blue ranks. A countercharge routed the bluecoats, sending them reeling back down the hill.[29]

A division (Stevenson's) separated Cleburne from Walker. Nonetheless, the artillery of the last attempted to deliver an oblique fire across Steven-

son's front on the attackers as they approached the Glass House. Colonel James C. Nisbet, commanding a brigade, rode over to Lieutenant Beauregard and directed him to open fire. "Have you an order to that effect?" the South Carolina officer asked. "Commence firing, Lieutenant; what we see is order enough for me." Beauregard's and Howell's batteries promptly opened.[30]

Stevenson's division artillery, to the left of Cleburne, missed a good opportunity by not firing diagonally on the enemy. When the assault began, however, these batteries remained out of position. Captain W. W. Carnes directed Barret's Missouri Battery from the reserve to a hill south of the tunnel, where it did good execution on the Federal right. It was only during Sherman's final assault that three of Stevenson's four batteries were fully positioned. (Because of insufficient room, Marshall's battery remained at the base of the ridge.) The final assault was easily broken up by the enfilade fire of Van den Corput's, Rowan's, and Baxter's batteries.[31]

Events now began unfolding on the left. By early afternoon, Joseph Hooker's three divisions had driven the Confederates out of Rossville Gap and were pushing the Confederates back up Missionary Ridge. "I shelled vigorously," reported Captain Ruel W. Anderson, "retarding their march considerably." He lost eleven men and five horses in the action and subsequent retreat.[32]

By three thirty the Rebel left was collapsing. At the same time, it became obvious that something major was about to happen in the center. There the Army of the Cumberland spread out in panoramic view in the valley below. At two o'clock a lucky shot from Battery D, First Michigan Artillery landed squarely in the midst of a battery near Bragg's headquarters (probably Cobb's), killing and wounding five men and a horse. At three thirty, six shots boomed from a Federal battery on Orchard Knob. At once, eleven brigades, some twenty thousand men, moved out of their fortifications and began the one-mile drive toward Missionary Ridge. From the crest, they appeared as two solid lines of glittering bayonets stretching for two miles.[33]

The spotlight focused on the gray artillery. Even before the Yankee infantry advanced through the wooded area, bursting shells began to pepper the air. An officer of the Seventy-fifth Indiana reported that the shells did little harm. "I ordered my men to lie down, and remained in this position under a harmless but annoying fire of artillery (the shells falling inaccurately)." As

the bluecoats moved out into the open plain, the fire increased. Guns thundered and leaped back in recoil; they were quickly sponged down and a fresh round rammed home. Union troops picked up the pace and then broke into a run. Federal siege guns in Chattanooga thundered above the din of the fieldpieces. Gunners on Orchard Knob made a direct hit on a Confederate caisson on Missionary, causing a huge explosion.[34]

Despite Bragg's later claim that "our batteries opened with fine effect," the barrage did little to blunt or even delay the attackers. Many of the shells burst harmlessly some twenty to thirty feet in the air, and others burrowed in the ground without exploding at all. One Union officer noted that fatigue took a far heavier toll on his men than did the Rebel artillery. The Seventy-fourth Indiana reported one wounded, and the Ninety-second Ohio had three wounded. One historian has calculated that several Yankee regiments sustained no casualties at all and that most had under a dozen. Watching from atop the ridge, Brigadier General Manigault observed that "a plunging fire against infantry is far less effectual than over a level plain or slightly undulating ground."[35]

Almost before anyone realized what was happening, the Federal juggernaut sliced through Breckinridge's defense line at the base of the ridge. As the Southern infantry scurried up the mountain, waves of George Thomas's Cumberlanders pressed onward behind them. The gray artillery stood helplessly mute. Even if they could depress their muzzles still more, which they could not, they would hit their own men. Cannoneers lit short fuses and hurled projectiles by hand at the attackers. Panic broke out as caissons dashed along the crest.[36]

The initial breakthrough came at Zacariah Deas's brigade of Patton Anderson's division. The Southern line simply melted as the troops ran down the south slope. Anderson had Major Alfred R. Courtney's four batteries thinly spread along his line. William F. Tucker's brigade and the left of Arthur M. Manigault's brigade soon disintegrated, leaving one section of Garrity's battery on the Bird's Mill Road and one section on the Shallow Ford Road exposed. A Napoleon gun on a knob near the Bird's Mill Road was captured, but Garrity managed to whisk his other guns to safety.[37]

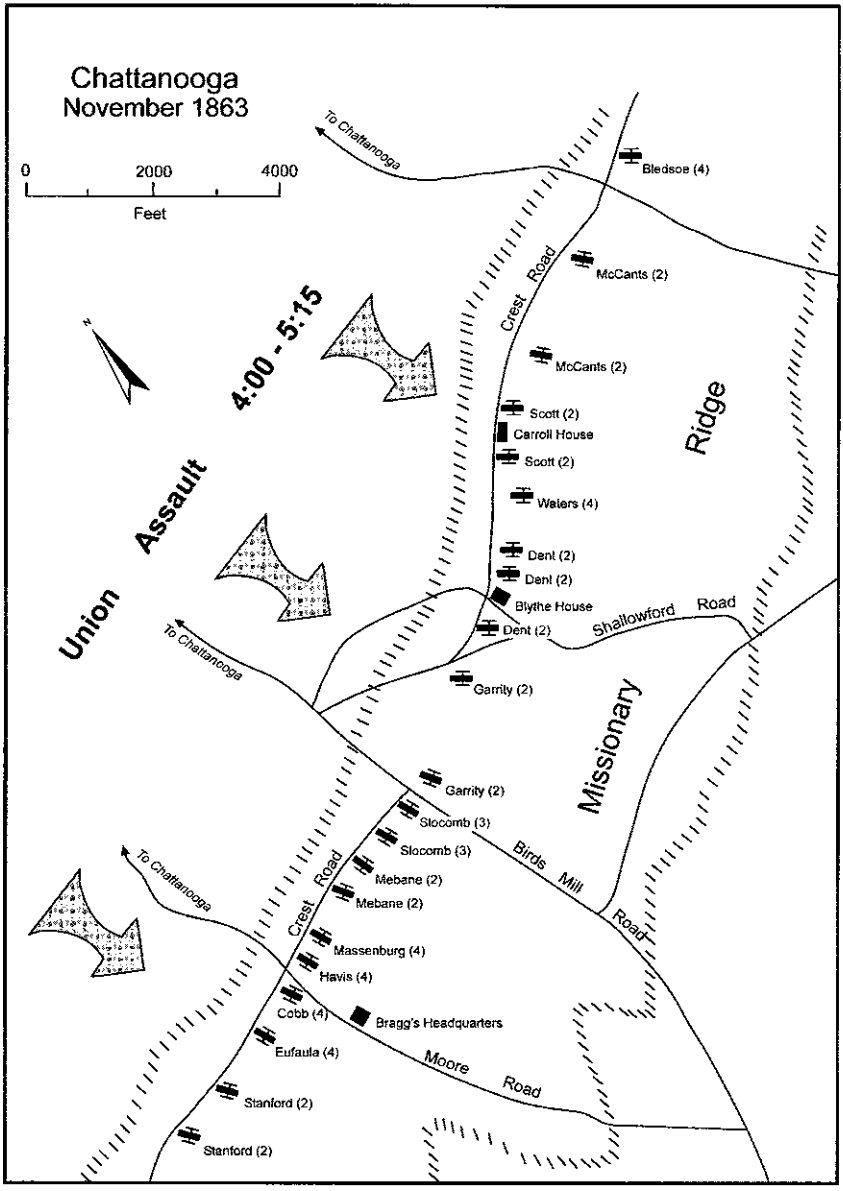
William B. Hazen's brigade overran Garrity's battery. Sergeant Brian P. Critchell of the Sixth Ohio described the determined stand of one of the cannoneers:

> There was a tall, rawboned Johnny gunner who was fighting like the very devil himself . . . with a heavy gun swab, and he seemed to me to be the biggest man I ever laid eyes on. A half-dozen of our boys went at him but he stood his ground. A heavy revolver, all the cartridges discharged, was thrown at him. It struck him full in the face with force sufficient to knock out a bull, but he only shook his head and went to work again. I threw up my sergeant's sword cracked away at the swab . . . and it shattered clear to the hilt. The big reb wouldn't yield an inch, and finally one of our boys . . . caught him off guard, and rammed a bayonet clear through him with such force that the barrel, too, passed out the other side of the big fellow's body. Well, that man mortally wounded, didn't give up, and as he lay there on the bloody turf, with his entrails hanging from the awful hole in his stomach, he grabbed a pistol and winged another boy in blue before he died.[38]

The men of Dent's battery, north of the Shallow Ford Road and extending beyond the Blythe House, now found themselves in a chaotic predicament. The left section, on Sharp's Hill near the road, accidentally fired into Manigault's escaping Alabamians. The panicked infantry quickly clogged the Shallow Ford Road. A wave of blue engulfed Dent's battery, which lost five guns, two caissons, twenty-eight men, and thirty-five horses. An attempt to extricate a Napoleon gun jammed between two trees was abandoned when the Federals closed to within fifty yards. "Leave the gun, General, and save yourself! The Yankees are on you," Dent shouted to Manigault.[39]

Waters's Alabama Battery, spread out over a hundred yards south of the Carroll House, now faced the enemy from its front and advancing up the ridge from the south. Indeed, Dent's captured guns were being turned on them. "We kept up the fire until the enemy was within thirty yards of our gun and had reached the top of the ridge to our left, and were being subjected to heavy enfilade fire," remembered one of Waters's men. The piece was limbered, but the two lead horses quickly fell. The advancing Yankees encircled three of Waters's guns, along with two caissons.[40]

North of the Carroll House, Scott's battery, a section on a knoll on either side of Alfred Vaughn's Tennessee Brigade, was likewise in trouble; three of his four guns were abandoned. Two of the pieces got to the bottom of the


Chattanooga
November 1863
0
2000
4000
Feet
To Chattanooga
Bledsoe (4)
McCants (2)
Crest Road
McCants (2)
4:00 - 5:15
Scott (2)
Carroll House
Scott (2)
Ridge
Waters (4)
Union Assault
Dent (2)
Dent (2)
Blythe House
Dent (2)
Shallowford Road
To Chattanooga
Garrity (2)
Missionary
Garrity (2)
Slocomb (3)
Slocomb (3)
Birds Mill Road
To Chattanooga
Crest Road
Mebane (2)
Mebane (2)
Massenburg (4)
Havis (4)
Cobb (4)
Bragg's Headquarters
Eufaula (4)
Moore Road
Stanford (2)
Stanford (2)

ridge when, reported a Federal officer, "our men fired at them, and the rebel artillerymen cut the traces and ran away with the horses, leaving the cannon." With only five of eighteen guns remaining, Courtney's battalion lay in ruins.[41]

The fighting rippled south toward William Bate's division. Blocking the path was Captain Cuthbert H. Slocomb's Washington Artillery, with three guns on each of two prominent eminences. Lieutenant J. A. Chalaron commanded the northernmost section, closest to the Bird's Mill Road, and Lieutenant William Vaught led the section farther south. At this critical moment a gun, either from Bridge's Illinois Battery on Orchard Knob (as Chalaron suspected) or one of Dent's captured pieces that had been swung around (as Bate theorized), made a direct hit on one of Chalaron's limbers, exploding both it and the one next to it. The deafening explosion, audible across the entire battlefield, sent a smoke mushroom high into the air. Most of the horses were killed, and those remaining had to be cut from their harness.[42]

Slocomb called for his remaining limbers to retire, but it appeared as though reinforcements were on the way. Lieutenant Chalaron had spotted and was bringing forth the Fifty-eighth and Sixtieth North Carolina (consolidated). Before reaching his position, however, the Tar Heels fled in disorder. The New Orleans gunners attempted to escape with four of their six guns down the reverse slope. Halfway down the grade, however, the guns became mired in mud. Vaught unhitched the caisson teams in order to double-team the guns. In this fashion two pieces made it to the base of the slope, where they again sank to the hubs in mud. The redlegs removed four limbers and sixty horses, but as a fighting unit the battery was destroyed.[43]

Massenburg's Georgia Battery, led by twenty-seven-year-old former Macon druggist Thomas L. Massenburg, withdrew its guns slightly as the bluecoats began to surge up the slope and the Confederates could no longer depress their guns. The captain later apologetically explained in a letter to a Macon newspaper "how I lost my battery." Massenburg wrote:

> Presently I saw our line broken and a Yankee flag floating over one of our batteries [Slocomb's] about a quarter of a mile on my right. . . . I immediately limbered up and galloped towards them, but before I could reach them they [infantry] broke again and ran down the hill as fast as they could go. By this time, the whole line

on the left and center was broken, and I had only to follow the infantry down the hill, which I did with all speed, being hurried considerably by the Yankee bullets that were flying thick and fast around us, but I reached the foot of the hill all safe, and doubled my teams to get up the second hill; the horses were so much worn down that it was impossible to get any of them to move the guns, so I reluctantly gave the order to take out the horses. It was here that Lieut. Foster fell, while he was on foot trying to save the horses of his section, when a shot [bullet] struck him in the head and another in the breast. As he fell he exclaimed, "Boys, I am killed, cut your traces and save your horses."

It is truly miraculous that no others were killed, for the fire above us was very hot, and there but few men in the gorge there besides ourselves. Several horses were shot while the drivers were getting them unhitched—altogether I lost thirteen. Three of the men were struck, but not sufficiently to disable them. Our Major [Robertson], as I have always heard of him, showed great coolness and gallantry, and rendered most sufficient service in rallying the men on the second hill. I think I may say he is the coolest man in action I ever saw. Havis lost two guns. My men stood well and I am proud of them, as I have heard that Maj. Robertson spoke well of their actions.[44]

It appeared as though Mebane's Tennessee Battery would now be overrun. One section was just south of the Washington Artillery, while the other section unlimbered in the middle rear of Tyler's brigade. Having expended 543 rounds, Mebane's men had nearly emptied their caissons. The Tennesseans hitched up their four 12-pounder howitzers and withdrew to a second line east of their position. Remarkably, they lost only three men and two horses. Havis's Georgia Battery, slightly north of the Moore House, was not as fortunate, losing two 12-pounder Napoleons.[45]

Next in line came Cobb's battery, set up near Bragg's headquarters at the Moore House. It was a hard-fighting but ill-fated outfit that enjoyed the dubious honor of having sustained more casualties to date that any battery in the army. Prior to Missionary Ridge, it had lost a staggering ninety-one men and 112 horses. During the Union attack, the Kentuckians fired off shots

from their guns "Lady Breckinridge" and "Lady Buckner," one shot exploding dangerously close to General Philip Sheridan. "I shall take those guns for that," he blurted. Making good his vow, his men now swarmed over all four guns and caissons. Another battery was gone.[46]

A. P. Stewart's division, to the left of Bate's, was hit from the front, rear, and both flanks. The Eufaula Artillery and two pieces of Stanford's battery were positioned between Gibson's and Strahl's brigades, while Stanford's other section and Oliver's battery unlimbered between the Nineteenth and Twenty-fourth Tennessee. So steep was the grade to the top that all the caissons had to be left at the base of the ridge. Stewart would be criticized for "clumping his artillery" and giving "little attention" to his batteries, but the enemy gave him little time to deploy. Lieutenant James S. McCall, commanding Stanford's battery, had his gunners open at five hundred yards with shell, soon exhausting their supply. As the blue infantry clawed up Missionary Ridge, he switched to canister, but he counted only sixteen rounds to the gun. "Before we could get our gun limbered two more of our horses were shot down, and it was no longer in our power to save our gun," explained a member. "Nearly all of their [Federals] guns being empty, I think saved us from death. . . . The bushes being so thick kept us from seeing them until they were within a few steps of us." The battery fled with light losses.[47]

Lieutenant William J. McKenzie, commanding the Eufaula Artillery, quickly exhausted his supply of canister and withdrew under the crest of a hill. As the Federals peaked the ridge they unleashed a volley on the lead horses of the 10-pounder Parrott rifle, killing three horses and causing the limber pole to snap; the piece was abandoned. The battery's 3-inch rifle, with all of the horses save one having been shot, was hand hauled a half mile to safety and attached to a wagon.[48]

To the north, Frank Cheatham rearranged his line facing southward across the ridge. In the confusion, several of his batteries were hit hard. Captain William B. Turner was heard to shout: "Number four, solid!" and then "Limber to the rear!" McCants's Florida Battery, its sections 750 yards apart, got caught in the melee. "I had my guns in position on the extreme left," explained Lieutenant Neal. "Looking in that direction I observed five heavy columns in a line perpendicular to ours on a hill one hundred yards to our left flank. . . . Maj or Hoxton . . . had observed them through his glasses as

had several other field officers, but as they had given me no orders, I continued firing as those in our front." Concluded Neal: "Finding our support gone and that it was impossible to drive back the immense column, I determined to retire firing, but the mountain range was too rough to manage the pieces by hand and I could not get the horses up to the guns." The left section swung about to open on the swarming Federals, who were not more than a hundred yards away, but in the process the guns, both 6-pounders, locked axles. Confederate infantry "came rushing along through our [battery] in utter panic. My men stood steady as veterans, but in vain. The infantry rushed over us pell mell and we could do nothing." Both pieces were lost.[49]

Two of Bate's brigades fell back a thousand yards east of Missionary Ridge and established a defense line to cover the retreat. Bragg initially ordered Havis's battery to set up on the next ridge and form a new line. The Georgians could not get the horses halfway up the slope, however, and abandoned the mission. One gun got jammed on a tree on the way down and had to be left. The gunners then had to run a 120-yard gauntlet through a hail of Yankee bullets. The cannoneers of the Washington Artillery found two abandoned cannon on the Crutchfield Road. Slocomb noted that he was joined by "several pieces belonging to different batteries," thus forming a piecemeal artillery line, backed by Cheatham's infantry. Major Robertson gave the New Orleans gunners one of Havis's pieces, which the Georgians refused to relinquish until ordered. The line held tenaciously for more than an hour as Bragg's disoriented soldiers continued their flight toward Chickamauga Creek. Night and exhaustion ended the pursuit. Although a number of batteries were now without horses and equipment, efforts were made to keep the men together as units. Hardee managed to rally his own and Breckinridge's troops in the valley below.[50]

Desperately, the surviving batteries attempted to reach Chickamauga Creek Bridge before it was destroyed. Lieutenant Beauregard, fearful that he would lose his four 12-pounder Napoleon guns, Yankee pieces captured at Chickamauga, shed tears. He knew of no other roads off the ridge, and his enfeebled horses could barely draw their guns. The men managed to get the guns down the south slope, only to encounter a boggy creek. The first piece became stuck, and after one or two pulls the horses simply laid down, despite the profanities and beatings of the men. About ninety infantrymen

from the Sixty-sixth Georgia plunged into the cold water and put their shoulders to the wheels. In this manner, each gun was gotten off. It proved momentary; the guns were subsequently abandoned not far from Ringgold.[51]

Perhaps no other battery experienced more frustrating delays than did Rowan's Georgia. The afternoon had now faded into dusk, and the drivers, unable to see, kept running the cannon off the road. Encountering stumps and deep ruts, the crews had to unlimber the cannon and pull them out. The bridge over Chickamauga Creek had already been torched by the retreating Southerners as Rowan's last crew arrived. The cannon were raced across as the flames leaped up around the men. Again, near the railroad, a cannon got stuck in a bog, and the horses refused to pull it. Around daylight of the twenty-sixth, a mule team was sent to assist, and the piece was finally removed. The horses now refused to haul the traveling forge. All the tools were discarded to lighten the load, but to no avail. More mules were called for. By the time the additional teams arrived, the infantry rearguard passed, with enemy skirmishers in close pursuit. A lieutenant rapidly hitched up the mules and pulled the forge to safety.[52]

During the early morning hours of November 26, the shattered Army of Tennessee snaked out of Chickamauga Station toward Dalton, Georgia. Cleburne's division, positioned at Taylor's Ridge, a mountain overlooking Ringgold Gap, handled the rearguard. By eight in the morning on the twenty-seventh, the enemy began to appear. Lieutenant Richard W. Goldthwaite masked two Napoleon guns from Semple's battery on the skirmish line. The spearhead of the Yankee advance fell into the trap. When the enemy skirmishers approached to within fifty yards, Cleburne slapped his knee and shouted: "Now, Lieutenant, give it to 'em, now!" Lanyards were jerked, and the guns blasted out deadly tins of canister. When the smoke cleared, an Arkansas infantryman saw "patches of men scattered all over the field." After skirmishing for five hours, Cleburne withdrew his troops.[53]

Back in his mountain stronghold at Dalton, Bragg began to tally his losses. The infantry suffered sixty-five hundred casualties, including many prisoners. Indeed, the figure was probably closer to eighty-five hundred. In comparison, the artillery reported a modest 6 percent loss: 16 killed, 59 wounded, and 87 missing, a total of 162, a third of whom were in Courtney's battalion. Rumors that Chief of Artillery Hallonquist had deserted

Table 7. Battery Losses, Missionary Ridge

Battery	Number of Losses
Ferguson's South Carolina	4
Waters's Alabama	3
Dent's Confederate	5
Scott's Tennessee	4
Washington Artillery	6
Havis's Georgia	2
Anderson's Georgia	1
McCants's Florida	2
Cobb's Kentucky	4
Massenburg's Georgia	4
Garrity's Alabama	1
Howell's Georgia	2
Eufaula Light Artillery	1

Source: Mobile Advertiser and Register, December 5, 1863.

were quickly denied. The artillery's light casualties did not give a true indication of its wrecked condition. Bragg had lost one-third of his artillery, including thirty-nine fieldpieces (nineteen 12-pounder Napoleons, nine 6-pounders, three 12-pounder howitzers, three 3.8-inch rifles, one 3-inch rifle, and four 10-pounder Parrott rifles), two 24-pounder siege guns, twenty-eight caissons, twenty-five limbers, four battery wagons, one traveling forge, 2,336 rounds of fixed ammunition, and a good deal of harness (table 7).[54]

Chief of Ordnance Oladowski immediately went about restocking. Some of the Union guns captured at Chickamauga and earmarked for recasting into Napoleon guns were recalled from the Atlanta Arsenal to temporarily fill the void. Because of the loss of so many Napoleons and Parrotts, however, the armament modernization program had received a serious setback. The most dangerous shortage was in ammunition. The ninety-six guns atop Missionary Ridge had expended 1,033 solid shot, 2,742 spherical case shot, and 2,642 shell, a total of 6,417 projectiles, or 65 rounds to the gun. Considering the time duration, this averaged sixteen rounds per minute for the length of the six and one-half hour battle. Inasmuch as the Atlanta and Augusta arsenals could produce only 125–150 rounds per day, the equivalent

of one month's total combined output of both of them would be required to replace the ammunition expended and captured.[55]

It was perhaps ironic that Bragg's last battle resulted in an artillery disaster. In a real sense, this would always be his branch. In it, he had received his experience and risen to prominence. In many respects, however, the long arm was now different. Tactics, armament, and organization had all measurably changed. Bragg's failing was that he did not adjust to these changes. In a larger sense, this was his shortcoming as a commanding general. On November 30 his formal resignation was accepted by the Richmond government. Two days later, the "old artilleryman" left Dalton without fanfare.

10
Reorganization at Dalton

The battles around Chattanooga had exhausted the Army of Tennessee. Rest and recuperation would be required. Fortunately for the army's temporary commander, Lieutenant General William J. Hardee, the Federals did not launch a December offensive as they had the previous year at Murfreesboro. His troops thus settled in for the winter—the third for many of them.

Life at Dalton was closely regulated. At daylight, the company bugler awakened the company. Fifteen minutes later came the "Stables" call, signaling the grooming, feeding, and watering of the horses. Breakfast was served at sunrise and animals inspected at ten o'clock. The men assembled for roll call at noon, followed shortly by dinner. The artillerymen drilled daily, weather permitting. "The artillery drill became a matter of much interest to me," admitted a new recruit of the Washington Artillery. "The horses of our pieces and caissons knew the different bugle notes as well as the men, as also the 'feed call.'" Several times a week, company inspection occurred at two thirty. The afternoon "Stables" came at four o'clock. The men assembled for dress parade at sunset, followed by supper. The men entered their quarters by eight o'clock, and "Taps" sounded an hour later.[1]

Life was not all drill and regimentation. On Christmas Day in Key's battery, the men danced "happily to the tune of an old fiddle." Henry Semple's battery celebrated with a meal of turkey, sausages, and eggnog. Still, no one could escape the reality that another Yuletide had passed with the war unconcluded, and one artilleryman candidly noted that it was "a poor Christmas."[2]

A late winter snow prompted several snowball fights. "Just after stable call Major Hoxton sent me word to bring my company out as he wanted to

storm Major Palmer's battalion," wrote Lieutenant Neal. "We captured their camp with a yell and whipped them off the ground. Stanford's battery attacked Oliver's, and then the combined companies pelted Fenner's. Everything was taken in good fun but it was rough play. The ground was speckled with blood from bruised noses." Casualties in the Washington Artillery included the captain (two teeth knocked out), a lieutenant (black eye), and five privates (bloody noses). Other activities were more aesthetic. Some artillery companies formed acting troupes. Turner's Battery Amateurs presented "two pantomimes and one burlesque tragedy—'The Pirates of the Aegean Sea.' A good hit and well-performed," critiqued one soldier. Fenner's battery performed the opera *Zimluco,* accompanied by a band and a choir of Kentuckians. The Dalton encampment was not all frolic, however. During the religious revivals that swept the army during this time, many artillerymen came under conviction. One preacher went to the artillery encampment at Kingston and stayed twenty days, preaching nineteen sermons. Sixty cannoneers gave their profession of faith, including three sons of ministers.[3]

Hardee soon set about the task of rebuilding the wreckage of the army. He counted only thirty-nine thousand troops in early December, including twenty-five hundred artillerymen. The badly crippled long arm was depleted in guns, ammunition, and horses. On December 6, five of the hardest hit batteries—Scogins's Georgia, Massenburg's Georgia, Rivers's Arkansas, Waters's Alabama, and Baxter's Tennessee—were stripped of their remaining horses and assigned to garrison duty in Atlanta. Scott's Tennessee Battery was discontinued, forty-two of the men being transferred to Swett's company, and Dawson's Georgia Battery returned to the Army of Mississippi. The realigned battalions comprised three batteries each.[4]

Hardee informed the Richmond government and the army's new commander-in-waiting, General Joseph E. Johnston, that the troops were rapidly recovering. On December 17, Hardee even suggested an offensive. Taking pride in replacing many of the captured guns (presumably from Chickamauga captures), he noted that the artillery was once again serviceable. The reports turned out to be exaggerated half-truths, which created a false impression in Richmond of the Dalton situation.[5]

The artillery had certainly not recovered. On December 14, only ninety-five pieces were assigned to the infantry, including eighteen old 6-pounders.

A number of batteries possessed only two or three guns, and two companies, Bledsoe's and Anderson's, had none. The artillery ammunition of the two corps and the reserve averaged only 120, 137, and 146 rounds respectively. Shortages also existed in ordnance stores. Mebane's battery needed twenty-four saddle blankets, six bridles, eight halters, three saddles, and fifty horse brushes. An inspection of Smith's battalion revealed numerous shortages. The friction primers were unreliable and replacements needed, "but others are not wanted unless they are good." The harness in Turner's battery was old and worn. Other battalion deficiencies included twelve guns, three forges, two battery wagons, and fourteen caissons.[6]

The artillery, as with the army as a whole, experienced a manpower crunch. The batteries averaged only eighty-one effectives each. Howell's Georgia Battery had ninety-six men, two of whom were in the hospital. Captain Howell complained that "another thirty men [were] absent from sickness or pretending. None gone less than three months, some eleven months."[7]

General Johnston arrived at Dalton on December 27. For the next few weeks he inspected his command. "I had every man turn out with his brush broom to clean the battery for inspection," explained Captain Key. "General Johnston reviewed General Cleburne's command and after he passed through the battery I was honored with an introduction to him by General [Lucius] Polk. General Johnston is about fifty years of age, is quite gray, and has a spare form, an intelligent face, and expressive blue eyes. He was very polite, raising his cap to me after the introduction."[8]

Johnston immediately recognized the artillery as one of his principal problems. The organization was poor, and the gun crews were deficient in training, especially in firing. A shortage of field officers remained. The armament modernization program, initiated by Bragg ten months earlier, was far from complete. The run-down condition of the animals nearly immobilized the batteries. The general placed the gunners on a rigorous training program. The battalions were inspected and reviewed each Saturday. Gun crews practiced on targets ten feet square at ranges of six hundred to one thousand yards. Although the artillery did not participate in the February 5 review, it proved impressive. "As far as the eye could reach our veterans were drawn up in three lines of battle," observed an officer.

Sham battles were conducted at a corps level while bands played "Yankee

Doodle" and the "Bonnie Blue Flag" to add realism. "The artillery when the advance begun was thrown forward on the flanks of the line and shelled away very vigorously with blank cartridges," observed a soldier. The role of the Washington Artillery, according to a member, was "to shell the woods and other sections of the opposing line while our men advanced." One man, whose battery was dubbed to be "captured," grumbled that he could "see no fun nor sense in it."[9]

Confidence in Johnston improved, and morale brought about mass reenlistments of the three-year men. Captain Douglas's battery unanimously reenlisted, and other companies followed their example. About 85 percent of the artillery in Hardee's corps, 1,026 men, signed for the duration of the war. In December, Captain Charles Fenner's Louisiana Battery arrived from garrison duty in Mobile. The next month, Major James Waddell's battalion of two Alabama batteries—W. D. Emery's and R. H. Bellamy's—arrived at Dalton. They had been exchanged since the surrender of Vicksburg but needed horses and field guns.[10]

The artillery continued to experience manpower shortages. A few Georgia batteries received some recruits, and some companies got infantry transfers. One of the last was Philip Stephenson, who joined the Washington Artillery. "The 'W.A.' is known throughout the Confederacy and to have those two letters on your cap is to have a passport to the hearts of all southerners," he wrote his mother. He found most of the members, at least the gunners, to be "society men" of French descent, between the ages of seventeen and twenty-one, even in 1864. Requests for most infantry transfers were nonetheless denied. "All of his army would go into cavalry and batteries if it were allowed," remarked General Johnston, who noted that he "would not transfer a soldier drilled in infantry to make a bad cannoneer."[11] As part of Johnston's attempt to mold the army into a cohesive fighting unit, Johnston adopted a uniform "stars and bars" battle flag. Battery standards, measuring 2½ by 3¼ feet, were somewhat smaller than regimental flags. Lieutenant Neal sent his battery's old flag home to his father for safekeeping. "It was a handsome banner when new but three years exposure has soiled it considerably," he explained. The Louisiana units in Gibson's brigade received unique flags. The Washington Artillery thus carried a white standard, with the "stars and bars" being located in the upper-left corner. Inscribed on the

white field was a crossed-cannon insignia and the name "5th CO. W.A." The flag also bore the names of six battles.[12]

The most urgent of the artillery's problems related to the horses, none of which were combat ready. Stanford's men began building stables on December 27 and did not finish until January 13, being hampered by inferior tools and bad weather. The horse stable could hold sixty and the mule stable twenty, the entire structure covered with an oak board roof. The feeble condition of the animals was attributable primarily to a shortage of forage. In December and January, no long forage and only half rations of corn were issued. Captain John Rowan, commanding a Georgia battery, reported that his starving animals had gnawed completely through their bridles. An artillery battalion commander complained that his horses received only thirteen pounds of corn over a three-day period (they needed ten pounds per day) and that much of that was weevil eaten. In January, Johnston directed that almost half the artillery horses be sent to the valley of the Etowah, near Kingston, where pasturing was better and a supply of grain nearer.[13]

Near the end of January, the trains began to run again on a regular basis, and the supply of corn increased. Soon full rations were being issued, but little or no long forage was to be had. Major John Johnston complained that his artillery horses went four days without it and then received only five pounds to the ration. A frustrated Captain Rowan commented: "Corn alone will not keep the animals in condition; they will not eat rations of corn if no long forage is furnished. Horses fed on corn alone are more liable to disease."[14]

In early January, an alarmed Johnston informed President Davis that the horses were not improving and were so feeble that the guns could not be maneuvered or saved in the event of battle. After the review of a corps in February, it was discovered that the teams of the Napoleon guns could not draw them up a small hill. At that time, sixty-four pieces remained at Dalton, and forty-eight were with the pasturing teams at Kingston and Calhoun.[15]

Disease spread among the stock. Rowan lost eighteen horses in three weeks, and ten of his remaining forty-eight were listed as unserviceable. Captain Ruel W. Anderson lost nearly all his animals in January. Little could be done for the animals. Home remedies were used for minor afflictions, but

nothing was available for distemper or the highly contagious glanders. A veterinary was requested, and a horse infirmary was established south of Macon, but problems persisted.[16]

Appeals went out for help. On February 8, Johnston wrote President Davis that the artillery was deficient four hundred horses. About a week later, the army quartermaster requested five hundred. Two weeks after that, the quartermaster general in Richmond was informed that six hundred were needed. When pressure continued for an offensive, Johnston informed the government that to make his artillery effective "at least 1,000 fresh horses are required." The Richmond government, armed with the exaggerated Hardee appraisals of December, remained dubious of Johnston's claims. The ambiguity of Johnston's reports widened the credibility gap. In the short span of a month, he had raised the number of required animals from four hundred to one thousand. Future reports failed to substantiate these needs, and, from the beginning, official requisitions were placed for only five hundred horses.[17]

Even if Johnston overstated the case, the situation remained severe. In late February, an inspector found many of the guns drawn by four or five horses, rather than the required six. Mules were used in some of the teams. A number of late arrivals were diseased and useless before placed in service. When Captain Key received five new animals for his battery, he described them as "among the poorest specimens I have seen since the beginning of the revolution."[18]

The Richmond government remained unimpressed with Johnston's continued insistence that the artillery needed more horses. In March, Lee's chief of artillery, Brigadier General William N. Pendleton, arrived at Dalton to inspect the batteries. He was one of a series of envoys sent by Richmond to ascertain whether Johnston's reasons for continued inactivity were valid. Convinced that the main Union offensive would come in Virginia, Richmond officials seemed unable to comprehend that the Federals possessed the power to wage a two-front war. Pendleton arrived at Dalton at daybreak on March 11 and, despite the exhausting journey, immediately began to inspect the artillery reserve. Accompanied by Major W. C. Preston, the army's artillery inspector general, he reviewed the assembled batteries. The next day, similar inspections were made of Hardee's and Hood's battalions. Dur-

ing the next few days, written inquiries were submitted to battalion commanders and an impressive array of data gathered. By the sixteenth, the work had been completed.[19]

Pendleton noted that the horses were "certainly thin," but added that conditions in the Army of Tennessee were no worse than in other commands. Fresh horses continued to arrive, and he concluded that "no serious anxiety need be felt, I believe, respecting them." Despite these words of assurance, the situation was far from resolved. On April 1 some nineteen hundred horses were on hand, for an average of sixty-three per battery. Ten percent were unserviceable, and 445 more were required.[20]

In April another inspector, Colonel A. H. Cole, was sent to Dalton to study Johnston's "frequent calls for horses . . . varying in numbers at different times." Cole discovered that of the 525 fresh artillery horses recently received, about 100 had been diverted for uses by wagon masters, clerks, and officers. The army quartermaster had not turned in broken-down stock for rehabilitation, which had resulted in the loss of twenty-five hundred animals between January and April.[21]

In early May, the horses of Garrity's and Dent's batteries grazed next to the railroad near Dalton. An approaching train spooked them one day, stampeding the animals in all directions. "I have lost five permanently I fear," Dent lamented to his wife. "It is a serious loss. Garrity lost six. I have some men out still but I have but little hope of finding them. . . . I dislike very much to lose a single horse. They are scarce and hard to find."[22]

Johnston pushed ahead on the armament modernization program, but a shortage of raw materials frustrated his efforts. The casting of 12-pounder Napoleons was predicated on the availability of copper because each gun required more than a thousand pounds. The Federals now held the Ducktown mines near Chattanooga, source of 90 percent of the Confederacy's copper supply. Casting of bronze Napoleons continued for the time being at government foundries, but at a curtailed level. This was accomplished by utilizing stockpiled supplies and by melting down obsolete cannon.[23]

The Army of Tennessee continued to compete with the Army of Mississippi for light 12-pounders. In February 1864, Colonel G. W. Rains, at the Augusta Arsenal, informed Oladowski that a battery of Napoleons had just

been completed for him but that it had instead been ordered to Demopolis, Alabama. Another battery was nearly ready, however, and Rains assured him that it would be sent as soon as possible.[24]

Faults continued to be found with ordnance. In February an Augusta Napoleon in Swett's battery needed to be returned to the arsenal on account of flaws. Shortly thereafter, officials at the Macon Arsenal performed tests on a new battery of 10-pounder Parrott rifles. Oladowski found the results "so much unsatisfactory that I really do not understand its cause." Subsequent tests revealed that the grooves in the rifling varied in depth and that one gun was larger in diameter than the others. A Tredegar 3-inch rifle in Oliver's battery had the rifling grooves entirely worn away, and it was marked for replacement.[25]

When Pendleton inspected the armament in March, he found fifteen 6-pounders still in use, which he described as "nearly useless." The twenty-seven 12-pounder howitzers were "scarcely more valuable." Pendleton did see the need for a few howitzer batteries for use in broken and wooded country, but he believed that the number on hand was far too large. He recommended that all the 6-pounders be turned in and exchanged for 12-pounder Napoleons and that some of the howitzers be swapped for rifled guns.[26]

The government arsenals at Augusta, Columbus, and Macon continued to cast Napoleon guns, having turned out at least fifty-seven, twenty-three, and thirty-eight, respectively, by the end of 1863. Macon also produced at least eight 10-pounder Parrott rifles. Government Napoleon guns looked slightly different from their Federal counterparts due to their lack of a muzzle swell and slender cascabal knob. They were well made and dependable, but Captain Key complained that they weighed fifteen hundred to sixteen hundred pounds, as compared with twelve hundred pounds for a Federal light 12-pounder, which also had a lighter carriage. Key's criticism proved unfounded; C. S. Napoleons weighed in at twelve hundred pounds and sometimes slightly less.[27]

Fresh consignments of Napoleon guns continued to be rushed to Dalton. In March a battery of Columbus Napoleons was received, followed by a battery of Macon Napoleons in April and five Augusta Napoleons in early May. By early April all of the 6-pounders had been phased out and a few rifled guns received. Bellamy's battery obtained two Tredegar-made 3-inch rifles and two 3.2-inch Blakely rifles. On April 30 the armament consisted of

Table 8. Armament at Dalton, April 1864

Battalion	Napoleons	Howitzers	Rifles
Hoxton	8	4	
Hotchkiss	8	4	
Martin	6	6	
Cobb	8	4	
Courtney	4	4	4
Eldridge	6	2	4
Johnston	12		
Palmer	8	4	
Waddell	10	2	
Williams	4	4	4

sixty-four 12-pounder Napoleons, thirty-eight 12-pounder howitzers, six 3-inch rifles, ten 10-pounder Parrott rifles, and two Blakely rifles (table 8).[28]

The Washington Artillery received Napoleon guns in April to replace their howitzers and 6-pounders. "We would not have exchanged them for Parrott rifles," exclaimed a member, although he conceded that they were outgunned several times in the upcoming campaign. Captain Reuben Kolb's battery continued to be overlooked, however, forcing him to threaten to resign if his howitzers were not swapped for heavier weapons. It would nonetheless be June before he received new Napoleon guns.[29]

Many rifled shells continued to be deficient. In February, Oladowski sent a shipment of 10-pounder Parrott shells, but they instead turned out to be for 3-inch rifles. They fit Parrotts perfectly, however, and Rains assured Oladowski that "I have but little doubt you will find them superior to the Parrott shell." To remedy the premature explosions that routinely occurred with Blakely shells, Rains recommended that the prescribed powder charge be reduced to 1½ pounds. Pendleton's March inspection uncovered several other minor problems. A few defective 10-pounder Parrott shells still remained in Lumsden's battery. Fowler's and Semple's batteries required new friction primers and Gracey's some additional fuses. Garrity needed two and Douglas four new gun carriages.[30] Leather articles of all kinds remained in great demand. Despite Colonel Moses Wright's pledge to turn out a hundred single sets of artillery harness per month at his Atlanta Arsenal shops,

a shortage remained. The leather often broke in a short time and had to be replaced. Emery's and Bellamy's batteries had to be totally reequipped with harness. Swett's battery was still using the same harness it had been issued back in 1861, which was still in better condition than recent government issues. Key's battery received forty-eight sets in early April, the first it had obtained in three years. Jeffress's battery possessed the best harness in the army, it having been captured at Chickamauga.[31]

The multiplicity of items required by the artillery was demonstrated by a single day's issuance to Robert Cobb's battalion. On March 25 it received, among other items, 211 rounds of ammunition, 6 dozen buckles, 15 pounds of axle grease, 2 prolonges, 32 currycombs, 4 sponge buckets, 125 pounds of rope, 5 trail hand spikes, 2 sponges and rammers, 12 priming wires, and 3 fuse mallets.[32]

Plagued by shortages, the men often resorted to their own craftsmanship. An artificer in Turner's battery constructed new trails for the gun carriages in his company. Several of Darden's men fabricated drivers' saddles that were considered to be superior to the government product. Gracey's men contrived excellent horse brushes.[33]

The transportation remained in generally good condition, although a few problems existed. Each battery was allotted one baggage wagon, two forage wagons, and an ambulance. Besides the rounds in the caissons, three ammunition wagons were authorized per Napoleon battery and two per howitzer battery. The train of Courtney's battalion in February 1864 comprised nineteen vehicles: one headquarters wagon, one traveling forge, three baggage wagons, three ambulances, six forage wagons, and five ammunition wagons. At the same time, however, Palmer's, Hoxton's, and Martin's battalions were short nine, one, and one wagons respectively. Major Smith complained that the allotment of two wagons for a howitzer battery was inadequate, because it required eighteen hundred pounds per vehicle. Traveling forages had by this time been removed from the batteries and repair work left to small portable forges. Officers complained that they could often not generate sufficient heat to weld broken parts, tire rims, and horseshoes. Battery wagons were also discontinued during this time and regular wagons substituted for them.[34]

By mid-March of 1864, Johnston had penned the outline of a new army organization. Hardee commanded four divisions, and the newly arrived Lieutenant General John Bell Hood had three divisions. The artillery also

underwent restructuring. For some time a quasi-battalion structure had been in effect in the western artillery, but it was Johnston who solidified it. Each battalion was to consist of three four-gun batteries, one being assigned to each division and three held back as a general reserve. Field staffs would consist of a major commanding, a quartermaster, a commissary, and as adjutant a detached officer from one of the batteries. Surgeons were removed from the batteries and placed at battalion headquarters, to which at least two and sometimes three were assigned.[35]

Centralization of the batteries into battalions brought grumbling from lower-grade officers who saw their power diminished. A battery officer complained that "a captain under this battalion management is a perfect automaton." Another artilleryman described the battalions as "anything but satisfactory to the captains and lieutenants, because in such large bodies requisitions were never so well filled, nor ground so advantageous for action or camp chosen." For the most part, Pendleton was pleased with Johnston's structure, though he personally preferred battalions of four batteries commanded by two field officers.[36]

Johnston next grouped his battalions into three "regiments," one for each corps and the reserve. Hardee's regiment (Hoxton's, Hotchkiss's, Martin's, and Cobb's battalions) totaled 12 batteries, 48 guns, 742 horses, and 1,243 men. Hood's regiment (Courtney's, Eldridge's, and Johnston's battalions) mustered 9 batteries, 36 guns, 582 horses, and 1,078 men. The reserve (Palmer's, Williams's, and Waddell's battalions) comprised 9 batteries, 36 guns, 566 horses, and 1,016 men. The horse artillery formed a battalion of 5 batteries, 22 guns, about 335 horses, and 420 men.[37]

Officers had mixed reactions to the structure. Lieutenant Neal thought it was cumbersome. He complained that his regiment (Hardee's) would never be able to find ground for an encampment and would take up to two miles of road on the march. Major Melancthon Smith, on the other hand, reasoned that the organization would facilitate the massing of guns in battle. The structure, he wrote, would add much to the morale and efficiency of this "neglected branch of the service." Interestingly, Johnston enlarged his reserve at a time when other major armies, both North and South, were dispensing with it.[38]

The artillery organization initiated by Johnston in the spring of 1864 called for a full complement of field grade officers to command it. The artillery

reserve and the horse artillery would each be led by a lieutenant colonel and the two corps regiments by a colonel. Johnston informed Bragg, now in an advisory capacity in Richmond, that "there is not means of ascertaining if it [artillery] has officers for colonels or lieutenant colonels. Both of these grades should be filled." The restructuring raised the possibility of long-overdue promotions. Several officers were in line for promotion, and rumors floated freely. James Hallonquist, Melancthon Smith, and Llewellyn Hoxton were West Pointers. Felix Robertson, although unpopular with the men, remained in Bragg's esteem.[39]

Promotions had long been a thorny issue in the western long arm, but the brooding came to a head under Johnston. Lieutenant Colonel Hallonquist, Bragg's artillery chief, was politely shelved and given nominal command of the reserve. Hardee suggested that none of his artillery officers was competent for higher grade, perhaps a veiled assessment of Smith and Hoxton. Johnston conceded that he had not been impressed with the little he had seen of artillery officers in the February skirmishing before Dalton. "They exhibited a childish eagerness to discharge their pieces," he complained. Furthermore, none had ever commanded more than twelve guns. Johnston informed Bragg on March 12 that he had to depend on the government for "superior officers."[40]

Johnston passed over the obvious selections and looked to their peers in the Army of Northern Virginia. This created deep resentment. Four field officers had already migrated from the Virginia front. Major Samuel C. Williams had transferred in the summer of 1862, followed the next year by Major Alfred R. Courtney. When General D. H. Hill arrived in the Army of Tennessee in the summer of 1863, he brought with him his own artillery officer, Major J. W. Bondurant, who was promoted to lieutenant colonel. Hill later transferred, but Bondurant remained with the army. When General John Bell Hood arrived at Dalton, he likewise brought his own artillery head, thirty-four-year-old Colonel Robert F. Beckham (West Point '59), "an extremely nice & gallant young fellow," Colonel E. P. Alexander recalled. Prior to Beckham's promotion and transfer, he had been a major commanding Lee's horse artillery. Although these officers had proven skill and ability, every transfer blocked a run of appointments from within the Army of Tennessee. Whether or not justified, Johnston's Virginia search was bound to augment the perception that the western long arm was the stepchild to Lee's artillery.[41]

Having deposed Hallonquist, Johnston actively sought a candidate for army chief of artillery. In February he applied for Colonel Alexander, but Lee refused to relinquish his top artilleryman. Additional pleas proved fruitless, though the colonel desired the position. Bragg's counterproposal of Brigadier General Pendleton, then in Dalton inspecting the artillery, failed to receive Johnston's endorsement.[42]

Bragg presented several names to the commanding general, including the former defender of New Orleans, Major General Mansfield Lovell, who had been without a command for more than a year. Bragg described Lovell as "one of the best artillery officers in the old service, a good judge and fond of horses, which is a qualification Alexander is deficient in." Johnston proved receptive to the idea, claiming that "it [artillery chief] is no more inadequate to the grade of major general than are most of the divisions of artillery." Lovell, nonetheless, remained in the poor graces of the administration for his poor performances at New Orleans and Corinth, and Bragg proved unable to deliver on his own suggestion.[43]

While inspecting Johnston's batteries, Pendleton, apparently unaware that he himself was under consideration, began lobbying for the promotion and transfer of two officers in the Virginia army. He sought to have Colonel Thomas Carter promoted to brigadier general and assigned as Johnston's artillery chief and to have Lieutenant Colonel Robert Dearing advanced as colonel to command Hardee's batteries. Pendleton recognized that many of his brother officers in the Virginia army had little opportunity for deserved promotion, but he failed to recognize that an even worse situation existed in the western long arm. Although the states of Alabama, Georgia, Mississippi, and Tennessee furnished two-thirds of the batteries in the Army of Tennessee, they claimed only one-third of the field officers. This was precisely the type of disproportionate arrangement that Pendleton had bent over backward to avoid in his own artillery.[44]

When the recommendation of Carter and Dearing received Johnston's endorsement, smoldering resentments translated into verbal criticism. "Recently some complaints I learn privately have been heard from your artillery officers that they were being sloughed by their juniors in the Army of Northern Virginia," Bragg informed Johnston in March. "Lieutenant Colonel Dearing was junior, for instance, to all the field officers with you until recently promoted in the organization of General Lee's artillery." Bragg ac-

knowledged the leadership gap in the western long arm, but feared the morale effect of continued transfers.[45]

Johnston responded that he knew of only one complaint and that that had come from "an officer of the Virginia army, who, after his arrival here, had been promoted to lieutenant colonelcy over several senior officers. Lieutenant General Hood having brought with him a colonel of artillery, this officer thought himself ill used." The reference was obviously to Lieutenant Colonel Bondurant. It would have indeed been ironic if the officer who finally spoke out on this issue had himself been a part of the problem. Shortly thereafter he was transferred to Mobile.[46]

The War Department ended the speculation by appointing a compromise candidate as army chief of artillery: Brigadier General Francis A. Shoup, a thirty-year-old West Point graduate and artillery officer in the regular army who had served as an artillery officer at Shiloh. He later led a Louisiana brigade at Vicksburg. Upon the surrender of the army there, he went to Mobile. After his prisoner exchange was formalized and he recovered from illness, he requested service in the Army of Tennessee. Everything in his record suggested that he could fill his new office with distinction. Bragg described him as "an educated and disciplined soldier," and even Pendleton conceded that "he is said to be an excellent officer."[47]

Shoup arrived in Dalton in late March. Throughout April, he sought to insure that the artillery obtained its share of incoming recruits, schooled his officers in tactical command, and performed administrative duties. The position was actually one of a glorified staff officer and general troubleshooter; he had little tactical control on the battlefield.[48]

The two remaining appointments came as no surprise. At the last minute, Hardee gave, with Johnston's concurrence, a belated endorsement to Major Melancthon Smith's promotion to colonel and command of Hardee's artillery. Tall, thin, and affable, thirty-one-year-old Smith, "Lanc" to his friends, had temporarily commanded the regiment since its formation back in February. Two months earlier, Smith, disgusted at his lack of promotion, had requested a colonel's commission and transfer to the cavalry. Command of the horse artillery and a lieutenant colonel's commission went to Bragg's old ally Felix Robertson. While at Dalton the twenty-five-year-old Texan had continued to correspond directly with Bragg. When Johnston argued against a spring offensive, Robertson was telling his former commander what he wanted to hear: the artillery was "ready to do good service."[49]

The promotion of Robertson left a battalion vacancy. A number of company-level officers had been recommended for promotion. Thomas Stanford had seniority and an excellent service record. Charles Lumsden and William Jeffress were graduates of the Virginia Military Institute. Young Hiram Bledsoe, a capable officer, was said to frequently leave important tasks to subordinates. Cuthbert Slocomb had temporarily commanded a battalion and enjoyed the advantage of leading the army's most prestigious battery: the Washington Artillery.[50] The decision came down in February. Captain Henry Semple, the opinionated forty-three-year-old Alabama battery commander and former Montgomery lawyer, was notified that he had been promoted to major and assigned an artillery battalion in Hardee's corps. The appointment came at a time when Semple had his hands full. Once again, he was at loggerheads with his battalion commander, Major Thomas Hotchkiss. The ever-quarrelsome Hotchkiss had been busy at Dalton. By March he had preferred charges against five of his officers. In February, he had Semple arrested for the trivial charge of failing to file a quarterly return—nothing more than retaliation for their quarrel of the previous spring. In a subsequent trial, Semple was exonerated of all charges. The court concluded: "The whole testimony of the prosecutor shows a bias against the accused and he admits that he is unfriendly towards him." Semple accepted his new commission but requested—and eventually received—a transfer to the Department of the Gulf.[51]

Semple's departure thus left a battalion vacancy. Once again, a promotion was made from outside the army. In March a twenty-five-year-old former lawyer, Captain John W. Johnston, nephew to Joseph E. Johnston, was promoted to major and assigned a battalion in Hood's corps. Johnston had commanded a battery in John Pemberton's old Vicksburg army and since his prisoner exchange had been in search of a command.[52]

With the return of Major Joseph Palmer to the army (he received three batteries of Robertson's old reserve battalion), the spring round of appointments was thus complete and all vacancies filled. As of April 1, 1864, the following officers had been assigned (in order of seniority):

Brigadier General: Francis A. Shoup
Colonels: Robert F. Beckham, Melancthon Smith
Lieutenant Colonels: James H. Hallonquist, Felix H. Robertson
Majors: W. C. Preston (inspector), Alfred R. Courtney, Joseph

> Palmer, John W. Eldridge, Samuel C. Williams, James P. Waddell, Llewellyn Hoxton, Thomas R. Hotchkiss, John Rawle (horse artillery), Robert Martin, John W. Johnston (Captain Robert Cobb, commanding a battalion in Hood's corps, did not receive his major's commission until May 1864.)

For the first time, the western artillery was fully staffed with a complement of field grade officers. The transfer of three officers (Shoup, Beckham, and Johnston), however, had effectively blocked a number of anticipated intra-army moves. In the end, not one of the eight captains and only one of the four majors who had been recommended for advancement by their superiors had been promoted.[53]

Captain Dent was one of those who had hoped (wrongly) that his chances for battalion command might be enhanced. "Lt. Col. Bondurant of our Regt. has been moved to Mobile," he wrote his wife. "That creates a vacancy in the Regt. and as Maj. Courtney is the senior major he may be promoted—and then possibly the senior capt. may be made a major—when all this is done I would be second Capt. in the Battalion."[54]

Although positions had been filled, one problem remained, that of bestowing temporary rank, something commonly done but technically illegal. Typically it required only a few months for the Senate to confirm these new ranks, but in some cases (such as the confirmation of Bondurant and Hotchkiss) it took up to eight months. Too, some ranks were given under the classification of "temporary," meaning that they were needed immediately and for a specific position. These included Llewellyn Hoxton and Samuel C. Williams, but more notably Robert F. Beckham, who transferred under the "urgent application of Lt. Genl. Hood" and "without the sanction or knowledge of Genl. Lee," wrote Samuel Cooper, the secretary of war. "When his temporary appointment as colonel would cease, he would necessarily fall back to his former appointment of major." Two officers, Robert Cobb and J. P. Waddell, had no records on file in the War Department and, according to Cooper, "of course, are not confirmed as officers of artillery."[55]

The jockeying for field grade positions nearly overshadowed command changes on the company level. In late December 1863, the fiery thirty-three-year-old Lieutenant Thomas Key, a former newspaper editor, received a captain's commission to command the Helena (Arkansas) Light Artillery. He

had previously demonstrated his ability by leading his company at Tunnel Hill and on the retreat to Dalton. Captain Henry Semple's transfer passed the command of his Alabama battery into the capable hands of twenty-five-year-old Lieutenant Richard W. Goldthwaite. The War Department removed Captain T. B. Ferguson from command of his South Carolina battery for unstated reasons, replacing him with young René Beauregard. Captain William W. Carnes, against his wishes, was transferred to the Navy Department, he being an Annapolis graduate. His Tennessee battery went to L. G. Marshall, a man who could speak seven languages, but frankly was not the equal of Carnes on the battlefield.[56]

The most dramatic turnover took place in McCants's Florida Battery. In March the lieutenants of the company had Captain Robert P. McCants arrested for habitual drunkenness. Rather than face the humiliation of a trial, he resigned. "I do not think there is a better artillery officer in the army than McCants," commented Lieutenant Neal, "but he cannot command the respect of his men or his officers." Lieutenant Thomas J. Perry succeeded him.[57]

Although the artillery was still short a few captains, the supply of company-level officers proved adequate. By April, twenty-six captains, forty-seven first lieutenants, and fifty-six second lieutenants were assigned. This averaged out to one officer per twenty effectives. When all was through, however, only six of the army's 141 artillery officers had been promoted to captain or above.[58]

Johnston had accomplished much for the artillery. Even though he may have merely capitalized on its weakened condition to avoid launching an offensive, his efforts resulted in advancements to command, organization, and armament. Except for the number of horses per battery, the artillery reached its peak efficiency at Dalton. Whether these improvements would permit it to contend on an equal footing with the Federal long arm, which had long dominated in number of guns, weight of metal, ammunition supply, and skill, remained to be seen.

11
Boots and Saddles: Retreat to Atlanta

The ground was covered with a mild frost on the unpleasantly crisp morning of May 2, 1864. In the camp of Hotchkiss's battalion, a bugler sounded "Boots and Saddles" as the men began stirring about and harnessing their animals. As the battalion rattled toward the drill ground for morning maneuvers, a courier suddenly galloped up and ordered it back to camp. The distant booming of cannon could now be distinctly heard in the distance toward Ringgold. The Union army was on the move.[1]

Johnston placed his artillery on full alert. The batteries that had wintered at Kingston were ordered back to Dalton, while Felix Robertson's horse battalion went to Rome. Johnston's restructured long arm mustered eleven battalions of thirty-four batteries (144 guns), served by 3,146 men present for duty. The ammunition level was relatively stable, but the rounds, as always, would need to be carefully husbanded. Johnston's fifty-five-thousand-man army was clearly not in a position to effectively confront the Union host at Chattanooga. Major General William T. Sherman's army of 110,000 seasoned troops included 41 batteries with 207 guns, each with a supply of 400 rounds, and 4,459 officers and men. A reserve pool of eighteen batteries in Nashville would provide replacements for losses.[2]

Finally responding to Johnston's pleas for help, the War Department stripped troops from coastal areas and rushed them to Dalton. A brigade from Savannah arrived, as well as James Cantey's division and two batteries from Mobile. Lieutenant General Leonidas Polk's corps of one cavalry and two infantry divisions, with eight batteries of thirty-two guns, also hastened from Mississippi. Johnston would have a third corps.

The long-anticipated Federal advance began in early May. On the ninth,

Sherman pressed Johnston's line atop Rocky Face Ridge at three points. Three Federal batteries unlimbered on a small ridge between Tunnel Hill and Rocky Face Ridge and opened with an enfilading fire. A Kentuckian in Bate's division noted that "the [Federal] artillery has been playing the wilds with us. Several batteries are in our front, on a favorable hill for them, and have kept up a shelling all day. Slocum's [sic] pieces being unprotected, he has been unable to fire much—the sharpshooters as well as three batteries against him." An attempt to plant a battery in Mill Creek Gap was thwarted when Richard Goldthwaite's Alabama gunners got the range. The first shot burst directly in the midst of a gun crew, dropping five men and causing the piece to be temporarily abandoned.[3]

The next day two lines of blue infantry demonstrated on Bate's front on the southern flank of the ridge, but were easily driven back by the well-directed fire of three howitzers—two from Fenner's battery and one from Havis's. On the afternoon of the eleventh, the enemy again ran up a battery in Mill Creek Gap, opening with a rapid fire on Confederate skirmishers. A. P. Stewart ordered a rifled gun from the Eufaula Artillery and a Napoleon gun from Cobb's battery to silence it. "Within ten minutes time the battery was in full retreat, leaving one of their pieces in the mound disabled," an Alabama gunner boasted.[4]

While the Federals sallied and demonstrated at Dalton, the real action occurred to the south. Sherman sent James B. McPherson's twenty-five thousand Army of the Tennessee on a flanking movement, using Rocky Face Ridge as a screen. McPherson's undetected troops emerged from Snake Creek Gap on May 9 and began to probe the Reseca defenses. Cantey's division and two batteries (the eight Napoleon guns of John J. Ward's and Joseph Selden's Alabama batteries) awaited them. McPherson cautiously withdrew into the gap and waited.[5]

Loring's division of Polk's corps rolled into Reseca on May 10–12. Major J. D. Myrick's battalion of three batteries with a dozen 12-pounder Napoleon guns accompanied the infantry. On May 13 Johnston belatedly moved his army to Reseca, with Sherman in pursuit. The Confederates deployed in a fishhook-shaped line facing west and north—Polk's corps on the left, Hardee in the center, and Hood on the right.[6]

On the afternoon of May 14, S. H. Dent had his four guns on a ridge to the left of the Dalton Road, positioned to deliver a direct frontal fire. John

Rowan's Georgia Battery constructed its works at a right angle to Dent to cover the Dalton Road. As the men strengthened their position, the skirmish line was suddenly driven in. The battery came under a blistering fire, and cannoneers fell almost as fast as others took their place. The company withdrew, which left Rowan exposed from the left. A lethal enfilade fire shattered the Georgians. The battery lost eighteen men and nine horses in the bloodletting. The spokes of one of the guns were so splintered by bullets that false ones had to be rigged to remove it.[7]

The Federal assault having been repulsed, Sherman turned to his artillery to pulverize the "crook" of the Southern line. Several batteries on a series of wooded hills and ridges less than a mile from the Confederate line opened fire in what one Tennessean later described as "the most terrific artillery fire I was ever under in the war." The gray cannoneers fled for cover, and virtually no counter-battery fire developed. Hotchkiss's battalion, on the brow of a hill between Hardee's and Hood's connecting positions, came under a blistering fire. At places the earthworks were nearly obliterated. Goldthwaite's battery lost twelve men and nine horses in the barrage. Had the guns not been pulled back, attested a witness, "not a splinter of them would have been left."[8]

Bate's division, to the left of the crook, also came under a blistering fire. Cobb's and Slocomb's batteries occupied a bald hill behind Manigault's brigade, making them a tempting target. "Capt. Slocum [*sic*] and a gunner would occasionally slip up from behind the hill, the captain loading a piece himself and the gunner would fire it, then they would both take shelter behind the ridge," observed an infantryman.[9]

Sharpshooters plagued the Washington Artillery on the fifteenth. Corporal Sam Russell, disgusted with the inaction, sprang behind his gun to sight it, only to be shot through the forehead. Later in the afternoon, the Federal artillery again opened, the piercing accuracy of the Federal rifled guns disabling two of Slocomb's pieces, both "cut down by shot passing through the embrasures," observed a Kentuckian. The Yankees made a rare night assault that evening. Lieutenant Neal of McCants's battery noted: "We fired a large building and lit up the field and opened on them with a dozen pieces of artillery, repulsing their attack."[10]

At eleven thirty on the morning of the fifteenth, the XX Corps came storming through the thickets against Alexander P. Stewart's division on the

Confederate right. Hood had previously ordered Max Van den Corput's Georgia Battery advanced to a lunette fifty yards in front of the main line. The guns had been placed there after repeated orders from Hood to open an enfilade fire on a battery that had been annoying Thomas C. Hindman's division. The Federal infantry swarmed over the tiny fort, "striking down and bayoneting the rebel gunners, many of whom defiantly stood by their guns till struck down," reported a bluecoat. Although the attack was repulsed by the main line, the enemy made a lodgement in front of the guns, leaving the pieces in a no-man's-land. Later that night, the Federals dug away the front of the lunette and dragged the guns away with ropes. Although Hood later dismissed the loss as nothing more than four old iron 6-pounders, not worth the casualties in getting them back, they were in fact Napoleon guns.[11]

A four o'clock attack by Stewart's division ended in failure, along with the death of Captain Stanford. Earlier in the day the Mississippi Battery had advanced to the Green House in the angle. Preparatory to the infantry assault, the guns moved to a field on a forward ridge where, eight hundred to one thousand yards distant, was either a Yankee regiment or brigade; the gunners could not tell. The horses were quickly removed to a ravine a dozen or so yards away. Three guns opened, initially tearing up the ground in the rear of the bluecoats, but eventually the range was gotten. "Some of their men were seen elevated several feet into the air by the explosion," wrote W. H. Brown. As the Rebel infantry advanced to the assault, Stanford took a position behind a tree. Although this gave frontal protection, bullets soon came in at a right angle. Brown called on the captain to fall back to the earthworks with them, but he only answered, "I reckon not." Minutes later he was fatally shot in the head.[12]

Confirmed reports of a Federal crossing south of the Oostanaula River, coupled with the knowledge that Union guns could not reach the bridges, made the town untenable. Johnston ordered a retreat. A rifled battery would have been lost on the retreat but for Joseph Wheeler's troopers acting as rearguard, who pulled the guns to safety. The powerful Union artillery had played a dominating role at Reseca. The battle would prove a harbinger.[13]

The Federals lost four thousand men at Reseca, the Confederates three thousand. Johnston's long arm had suffered heavily, losing six Napoleon guns. Incomplete returns indicate that Van den Corput sustained twenty-

two casualties, Rowan eighteen, Swett sixteen, Goldthwaite twelve, Marshall twelve, and Slocomb ten. Major John W. Johnston, the young lawyer turned artilleryman, fell seriously wounded on the fifteenth. Operational control of the battalion went to Van den Corput for the balance of the summer. On a battery level, Captain Stanford was dead; "his place cannot be filled," lamented George Jones. Captains John Pelham and L. G. Marshall had been wounded, the last by standing too close to a gun and being blinded by the flash of a discharge.[14]

For the next two months, Johnston would adopt what historian Richard McMurry called a "strategic pattern," that is, entrench in a terrain position to his advantage and wait for Sherman to attack. Although seemingly ideal for artillery deployment, the superior range of Federal rifles, as seen at Reseca, could partially neutralize the advantage of earthworks. Too, Sherman, once out of the mountains of north Georgia, could, and easily did, flank Johnston out of position.[15]

The country south of the Oostanaula River comprised more open terrain and rolling hills. As Johnston retreated past Calhoun, a troubling incident occurred with Hotchkiss's battalion. Because Hotchkiss received orders directly from his regimental superior, Colonel Smith, Major General Cleburne was prevented from withdrawing the battalion at the appropriate time. The result was that the artillery "disarranged to some extent the progress of the whole corps," the division commander complained. Not being an isolated incident, it was apparent that clearer lines of communication had to be forthcoming.[16]

W. H. Jackson's cavalry division, with Captain John Waite's battalion of horse artillery, joined the army at Adairsville. The three batteries comprised twelve guns, half of them 3-inch rifles. Two batteries of Samuel French's division—Captain Ed Croft's Georgia Battery and Captain R. B. Waddell's South Carolina Battery—also arrived at that place in advance of the division. Although the men and guns had come by train, the horses had traveled over the ordinary roads, leaving them in poor condition. Ward's battery from Mobile would later unite with Hoskin's and Guibor's to form a battalion under Major George S. Storrs. Guibor's company comprised three merged and reorganized Missouri batteries that had been captured in the Vicksburg campaign.[17]

Johnston planned to ambush Sherman at Cassville on May 19, but the plan was foiled when Union cavalry stumbled into Hood's flank. Captain J. A. Hoskin's Brookhaven (Mississippi) Light Artillery unlimbered their three guns (the fourth being parked in the rear) in the front yard of an old lady's house. Although they repelled a Yankee cavalry regiment, the Mississippians were forced to retire to a fixed fortification south of the Canton Road. There they came under the counter-battery fire of the Eighteenth Indiana Light Artillery. One of the Hoosiers's shots made a direct hit, exploding a caisson, dismounting a gun, and killing four horses. Several of Hoskin's men subsequently fell captive, including Lieutenant A. J. Stewart, who had his leg blown off.[18]

Johnston withdrew his army to a line east and south of Cassville. Upon inspection, Chief of Artillery Shoup warned that a section of Polk's corps in the center could be enfiladed by Union rifled cannon on a commanding ridge a mile to the northeast. Later that day, Sherman's guns predictably opened a heavy crossfire, battering French's division. In two of French's batteries, while coming into line and before the guns could even be unlimbered, one or two horses at each piece were killed. Hood's line also came under artillery fire. Johnston ordered a retreat across the Etowah River later that night. Although other factors influenced the retreat decision, the Federal artillery was clearly a factor.[19]

The primary role of the horse artillery during Johnston's retrograde movements was that of delaying action. Batteries would be placed on the skirmish line, causing the enemy to stop and delay. One battery (probably R. B. Waddell's South Carolina Battery) held up the Union advance outside Stilesboro for two hours.[20]

By the evening of May 24, the Southerners held a line east of Dallas running southwest to northeast. The head of Hood's column reached the crossroads of the New Hope Methodist Church on the morning of May 25. Information was received that a Union corps was nearby and moving up fast. Hood moved quickly, deploying his infantry facing northwest, with Stewart's division at the church. Old logs were hastily piled up for protection, while John Wesley Eldridge's battalion wheeled into position.

At four o'clock, as dark clouds began to roll across the skies, the Federals launched a vicious attack on Stewart's front. The enemy appeared, an entire corps, in ranks so deep that its front did not extend beyond Stewart's. For

the next three hours, in the midst of a blinding rainstorm, repeated assaults were checked. Lumsden's battery from the reserve came up in support. In the confusion, one man fell under a moving wheel and was crushed. It was not needed, as it turned out, and remained in park.[21]

An exhausted George Jones wrote in his diary that evening of the intensity of the action:

> "Commence firing," says Lieut. McCall (Capt. Stanford having been killed at Reseca.) "Exhaust your canisters first," says Gen. Stewart, in thunder tones. Our company opened with a terrific fire. Canisters and shells burst from every gun (seven times a minute). . . . "Quiet yourselves like men," says McCall, every man at his post. Down goes poor Dollar, shot in the head just as I was handing him a shell to put in the gun, and Geo. McMillian shot in his leg, poor fellow. . . . Our no. 1 Ben Hill, is struck on the head. What shall we do? Only two men at the gun, but Hill, brave fellow is he, he will not leave his post. . . . Also, Albert Lake, shot in his arm, stays until the Yankees are repulsed for the fifth time.[22]

Eldridge's guns lacerated the tightly packed Union ranks, inflicting many of the fifteen hundred Union casualties. Brigadier General Manigault later observed that this was the only battle in which he saw 12-pounder howitzers outperform more modern guns. The enemy advanced to within fifty yards of Charles Fenner's Louisiana Battery before being driven back. Three brothers handled one gun. Two fell wounded, and the third replaced them as rammer. One cannoneer suddenly noticed blood gushing from his ears, caused by the constant discharges. At one gun in Stanford's battery, all of the gun crew fell as casualties, although one wounded man remained at his post, blood streaming from his face. Colonel Robert Beckham, Hood's artillery chief, arrived on the scene and personally took command. Although overall Confederate casualties did not exceed five hundred, Eldridge's losses were high—forty-three men and forty-four horses killed and wounded. The effectiveness of the battalion structure when applied as a tactical unit was at last yielding dividends. Too, the rugged terrain south of the Etowah River had partially offset the added range of Sherman's rifles.[23]

Additional reinforcements were received at New Hope Church, including

Table 9. Johnston's Field Artillery, May 1864

Group	Battalions	Batteries	Guns
Hardee's Corps	4	12	47
Hood's Corps	3	9	36
Polk's Corps	3	9	36
Reserve Artillery	3	9	36
Horse Artillery	2	9	36

J. R. Yates's Mississippi and E. Tarrent's Alabama batteries from Mobile. These companies united with Selden's battery to form Major W. C. Preston's battalion. Johnston now had the largest aggregation of field artillery ever assembled by the Confederates in the west. The fifteen battalions, comprised of 187 guns and forty-six hundred officers and men, were arranged as shown in table 9. The armament, minus the horse artillery, included eighty-four Napoleons, thirty-six 12-pounder howitzers, and twenty-two rifles. Sherman's artillery meanwhile swelled to fifty batteries of 254 guns.[24]

On May 27, Sherman once again attempted to turn the Confederate right flank, and Johnston shifted accordingly. Cleburne's division was transferred to Pickett's Mill as an extension of Hood's corps. Hotchkiss's battalion occupied a position in the center of the division. At five o'clock Sherman launched his IV Corps. From atop a formidable natural ridge, Rebel infantry poured a withering fire into the enemy ranks. Goldthwaite's Napoleon battery went to the right to deliver an enfilade fire, but because of the tangled thickets and deep ravines, it could not find a place to unlimber. Cannoneers ran up by hand two howitzers and lacerated several lines of blue infantry advancing up a depression on Granbury's brigade. Key expended 187 rounds of spherical case shot and canister within two hours. Key's other section and Swett's four 10-pounder Parrott rifles enfiladed the enemy's reserves massing behind a hill. "I regretted that I did not have more guns for this service," lamented Cleburne. Night ended the fighting. It was the second undisputed victory in which a division had hurled back an entire corps. "From all information that could be derived from citizens and from the appearance of the battlefield, their loss, from our artillery especially, must have been heavy," appraised a soldier.[25]

Due to the nature of the campaign—heavy skirmishing with limited engagements—overall artillery casualties had not been heavy during May. By the twentieth, Cobb's battalion had sustained three killed and twelve wounded. From May 7 to 24, Robert Beckham's regiment counted five killed and eighty-seven wounded—almost all of whom were from Johnston's battalion at Reseca and Eldridge's battalion at New Hope Church. By mid-June, Polk's artillery had lost only sixteen men and twenty-seven horses. Four of Polk's batteries had not even fired a shot! Only one man in Robertson's horse artillery was wounded in May.[26]

Throughout late May, both commanders settled into the routine of sharpshooting, punctuated with occasional artillery duels. On the evening of the twenty-seventh, Colonel Beckham called up Courtney's and Van den Corput's battalions in support of Cleburne's division. A fierce exchange ensued between Beckham's guns and those of the IV Corps. Garrity's Alabama Battery succeeded in silencing a 20-pounder Parrott battery in a contest that lasted more than an hour. The habitual and frustrating problem remained the poor quality of the shells. Noted an Illinois soldier on the night of May 31: "The Rebels have just finished throwing 126 shells at us, only 19 of which bursted."[27]

William Bate's division went forward on the morning of the twenty-eighth in a reconnaissance-in-force on the Union right. What resulted was a poorly coordinated headlong assault against Union earthworks at Dallas. In the brief but fierce struggle in which Bate was repulsed, the Washington Artillery had a Napoleon gun disabled. "They got the drop on us," admitted one of the New Orleans gunners. A solid shot made a direct hit on the muzzle face of piece No. 3, killing one cannoneer, his legs blown off, and wounding several others. Even before the battery unlimbered, related Private Philip Stephenson, "our little Italian priest" was decapitated by a shell.[28]

June brought rains and more misery. During the first three weeks, it rained almost every day, which slowed Sherman's momentum. Fields and woods became soaked, roads turned into quagmires, and trenches became pools of water. Exhausted men labored to move guns and caissons over impassable roads. An *Appeal* correspondent noted how the mud impaired the artillery, "as two or three discharges from a piece imbeds it in the soft earth so as to render it perfectly useless."[29]

On June 10, Sherman again pressed forward. Small-scale skirmishing continued until the twelfth, when Thomas's Army of the Cumberland deployed in front of Pine Mountain. On the fourteenth, a group of officers, including Johnston, Hardee, and Polk, disregarded the warnings of Rebel artillerymen and climbed to the summit of the mountain to make an observation. As they gathered behind the rampart of René Beauregard's battery, the Federal Parrott rifles of Captain Peter Simonson suddenly opened, striking Polk in the chest and killing him instantly. It was of little consolation that slightly more than two days later Simonson was himself killed, although it was by a sniper's bullet and not an artillery fragment as one paper reported. W. W. Loring assumed command of the corps. The day after Polk's death, a half-dozen men of the Washington Artillery deserted to the enemy. In postwar years they insisted that they had fallen asleep and had been captured, but their names would be permanently removed from the roll of honor.[30]

Johnston withdrew from Pine Mountain and formed the first of three "Kennesaw lines," with Hood on the right, Loring in the center, and Hardee the left. Daily skirmishing continued, and the artillery on both sides was used to batter down the opponent. A heavy fire rained on Garrity's position on the fifteenth. "He [is] replying slowly, and doing some splendid shooting, every shell exploding at their guns," noted a journalist. On the sixteenth the Army of the Ohio's artillery seized high ground and began to enfilade Hardee's flank, although Loring's front was also hammered. Battery after battery was brought up to blast the stalwart graycoats. A gunner in Cowan's Mississippi Battery of W. W. Loring's corps scrawled in his diary on the seventeenth: "We experienced the severest shelling today I ever underwent. One section of our battery . . . replied . . . and did some good shooting. An ambulance was seen carrying off the wounded of the Y[ankee] battery & two of their embrasures were knocked to pieces."[31]

Johnston attempted to hold a new line that ran from Brush Mountain and then turned southward. On June 18, Major Storrs's battalion became heavily engaged while occupying a dangerous salient between Lost Mountain and the Marietta Road. Enemy skirmishers advanced to within two hundred yards while two Yankee batteries kept up an incessant pounding. A driving rain soon filled Storrs's shallow trenches, and the recoil of the guns caused the wheels to sink deep in mud. Working its pieces for ten

hours, Captain Henry Guibor's battery expended 418 rounds. Most of the men went to the rear for cover, but of the thirty cannoneers who remained, sixteen became casualties. Late that evening, General French sadly wrote in his diary: "Capt. Guibor has lost more men than he did during the entire siege of Vicksburg." Having been enfiladed by Thomas's artillery, Johnston withdrew on the night of June 18. As at Reseca and Cassville, the powerful Union artillery had again influenced a retreat decision.[32]

The rain added to the misery that evening. "Had a miserable time last night, traveled all night through mud & rain, teams baulked and all together it was the worst night I ever experienced in the army," wrote a Mississippi gunner. "Rained very hard today [nineteenth]. Took us until night to get all our guns and caissons up to our position." That same day, a member of the Washington Artillery wrote a friend: "About half our company are sick, from as much exposure, marching at night[,] building breastworks when not marching and remaining wet for 24 or 36 hours."[33]

Johnston's third Kennesaw line was closer to Marietta, the key being Kennesaw Mountain. Because of the steep incline of Kennesaw, engineers advised against planting artillery on the crest. Major Storrs did not believe it to be an impossible task. Finding a spur in the rear of Little Kennesaw, he obtained permission to cut a roadway through the brush up the mountainside. Pulled upward by a hundred men tugging on ropes, the first gun reached the summit within half an hour. The ammunition chests were dismounted and carried up empty. Several batteries were eventually brought to the top in this manner.[34]

From atop his mountain position, Major Storrs peered at the Federals in the distance. Although their works could not be seen because of the thick trees, campfire smoke clearly marked their position. "We rained shell and spherical case shot down upon them until satisfied that the campfires had been deserted," he recalled. So unexpected was the barrage that the enemy artillery offered no response until later afternoon. "So we ran our guns out of our works upon open ground on the brow of the mountain, and our men worked with a will to throw as many shot and shell among the wagons and teams as possible while the opportunity lasted, for the teamsters were seen to be very busy hitching up and going at full trot farther to the rear. . . . It was a general field-day for our battalion and so remarked by Generals

French, Loring, Gibson, Holtzclaw, and various artillery officers and engineers who came upon the mountain that day."[35]

Sharp battery duels again erupted along the line. "Phelan [Alabama Battery] and Perry [Florida Battery] were with Cheatham," explained Colonel Melancthon Smith. "Turner [Mississippi Battery] had been with Cheatham for several days, but at this place was sent to Polk at his (Polk's) particular request and having been put in a position on Featherston's brigade to endeavor to silence two of the enemies' batteries and had one piece disabled and six to eight men badly wounded. Two afterwards died. About this time [June 18] Captain [J. W.] Mebane was killed." Mebane, decapitated by a solid shot as he stood between two of his guns, was replaced by Lieutenant J. W. Phillips.[36]

Deafening artillery duels continued to rage between the lines. On June 19, Perry's battery was between Walker's and French's divisions. Unlike the other artillery companies, the Floridians kept their flag defiantly waving in the breeze, making a tempting target for Sherman's gunners. "Their line burst out a steady flame of fire all the day, but it did no harm except keeping us close in the muddy trenches," explained Lieutenant Neal. "The artillery fire was bad as the Yankee batteries could not see me or the smoke of my guns as the rain poured down all day."[37]

The next afternoon, Lumsden's battery, occupying a position on the southern crest of Little Kennesaw, was ordered to open on a suspected enemy position to "see what they had over there." Within minutes, an estimated twenty-four Union guns (actually thirty-four from six batteries) blasted a thunderous reply from ranges of a mile to a mile and a quarter that lasted half an hour. A shell fired by the Sixth Ohio Battery came directly through an embrasure, instantly killing a gunner, and crashed into a caisson, resulting in a huge explosion. A resounding cheer arose from the enemy. "They have not as good artillery as we have," noted an Ohio soldier who witnessed the event. "Our men just put them [shells] right where they wished after a shot or two." As for one of Lumsden's men, he remarked: "We found out what the enemy had over there and we did not stir up that hornet's nest again."[38]

Intense and sustained shellings inevitably led to hearing impairment on the part of some cannoneers. Lieutenant Billy Vaught of the Washington

Artillery was furloughed while at Kennesaw due to "neuralgia and deafness." Philip Stephenson admitted that he had intermittent deafness in postwar years, which he credited to his Kennesaw experience. "It must be remembered that it was almost like a shell exploding in a room, for we were in a 'room' [redoubt], lacking only wall and ceiling. Our custom was to put cotton in our ears."[39]

Sporadic cannonading continued over the cracking of musketry. Perhaps the most incredible exchange of cannon fire occurred when a Union gun fired a single shot and made a direct hit on a caisson on Little Kennesaw. Not to be outdone, a Rebel battery fired a single shot and destroyed a Yankee caisson. A cheer went up from both sides. Most shelling, however, amounted to random hits and misses. "Rebs shelled us for about an hour, silencing our batteries but doing the infantry little damage as we kept close to our works," noted a Kentuckian on June 20. "Our regt. lost one man. The rest of the Brigade and batteries about ten men and two or three horses."[40]

With relentless monotony, the artillery skirmishing continued. Swett's battery, "one of the best manned and finest batteries in the service," noted a journalist, "played with great accuracy upon the enemy works in front of Cleburne's right on the night of the 21st." It was probably Swett's men who disabled a 3-inch rifle in Bridge's Illinois Battery that day. The next day, an unidentified Southern battery atop Kennesaw opened with good effect at ten in the morning, prompting a belated and ineffective return fire.[41]

On the afternoon of Friday the twenty-second, the Confederate artillery got serious. With the Federals inching closer, the Kennesaw batteries opened a barrage that lasted several hours. An Ohio soldier wrote of the occasion: "At different times of the day [twenty-second] we were shelled by Rebel cannon on Kennesaw Mt., a 1½ distant, very rapidly an hour at a time. . . . They did our Reg. no harm—though they [shells] fell in front and rear of our line of works—some cutting through the head logs. . . . There were many shots fired from cannon on the Mt. One solid shot killed the Sergt. Maj. of the 2nd Min. wounding five others as we were passing by." In feeling out the Confederate left flank on June 22, the Federal artillery disabled a rifled gun in Croft's Georgia Battery of the horse artillery, blowing off a cannoneer's right arm in the process.[42]

Sherman planned a direct assault on Kennesaw Mountain, preceded by a fifteen-minute barrage by the artillery of two corps, on the morning of

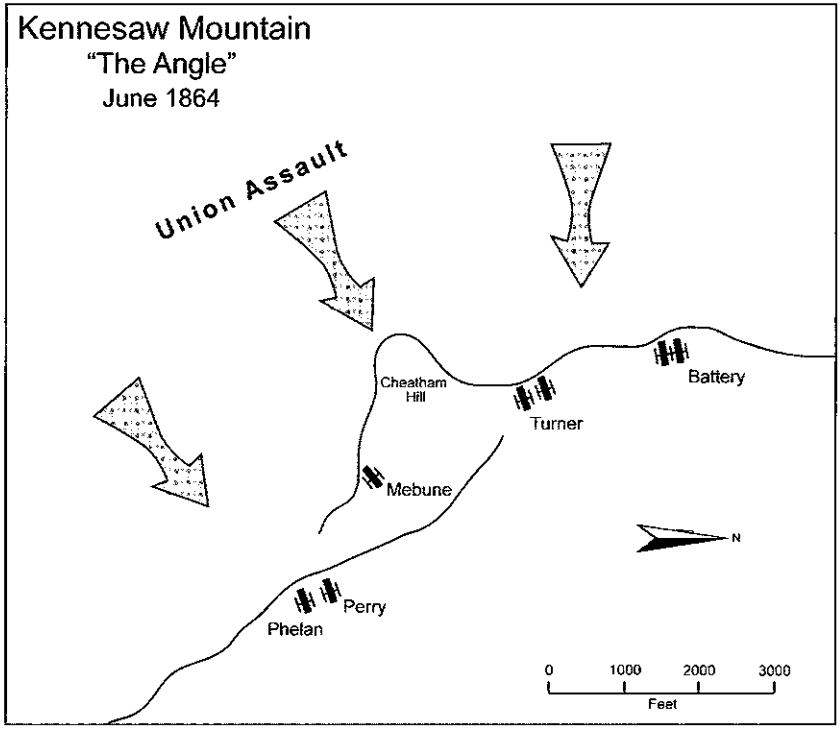
June 27. Although the Southerners were jolted by the concentrated pounding, the barrage inflicted little damage and fully alerted them to the impending danger. When the blue infantry finally emerged from their breastworks, Frank Cheatham's division was ready. A withering musket fire literally swept away the leading Union ranks.[43]

The Federals walked into an artillery trap. The batteries of Phelan and Perry were positioned to the left of George Maney's salient, later known as Cheatham Hill, and crossed fire with two of Wright's guns on the right. Colonel Smith had ordered these masked batteries to withhold their fire during the barrage. When the assault began, all ten guns opened with fury, shredding the Yankee infantry. A section of Turner's battery, on line between Cheatham's and Cleburne's divisions, had the enemy close to within forty yards before being driven back by blasts of canister.[44]

From atop the northwest summit of Kennesaw Mountain, Storrs's artillery opened an enfilade fire on Morgan Smith's division of the XV Corps, reinforced with troops from another division. The guns of Guibor's, Ward's, Hoskin's, Bellamy's, and Lumsden's batteries, coupled with the fire of infantry sharpshooters, raked the Union lines and caused them to reel back in confusion "before the guns got very hot," claimed Storrs. At ten in the morning the Federals assaulted Loring's right wing. The brunt of the attack fell on Tom Scott's brigade of W. S. Featherston's (Loring's old) division. Rolling forward in three waves, Federal troops advanced to within three hundred yards of the trenches. At that point, Scott's infantry, supported by the flanking fire of Cowan's, Bouanchaud's, Havis's, and one of Robertson's horse batteries, erupted in a wall of flame. The advancing line staggered to a halt. Unable to advance or retreat under the massed firepower, the troops remained huddled behind rocks and crevices for almost an hour, until they finally withdrew under a shower of artillery projectiles.[45]

Smaller action occurred on the Confederate right. "The 1st section of our battery shelled the woods for several hours at regular intervals. I went out this evening [twenty-second] and examined the ground in front of our battery," related a gunner in Hoskin's battery. "We did considerable execution. Killed 25 Yanks and it is thought wounded many more. I saw two of them—a ghastly spectacle."[46]

After his failed Kennesaw assault, Sherman once again resumed long-range shelling. On July 1–2, an estimated fifty-one Union guns pounded



Little Kennesaw in an attempt to knock out Storrs's artillery, particularly Guibor's annoying battery. Because of the angle of fire, they met with no success.[47]

Having to save their ammunition to fend off direct assaults, Rebel responses to such barrages were often limited. Such comments as those of an Illinois battery captain were not uncommon: "July 1, fired sixteen rounds without getting any reply from the enemy. July 2, fired forty-one rounds; enemy did not reply." These observations were confirmed by Rebel gunners. George Jones of Stanford's battery noted on July 1: "The Yanks gave us a heavy cannonading this afternoon. . . . We are saving our power and grape [canister] for a close range." Only July 9, Captain S. H. Dent remarked: "We are not allowed to fire at the Yankee batteries—ammunition too scarce." Johnston's reserve ammunition supply in early July amounted to a mere 2,164 rounds—half in Atlanta and half on the railroad cars at Vin-

ings, Georgia. The supply included only 460 rounds of 10-pounder Parrott shells.[48]

Johnston abandoned the Marietta defenses on the night of July 2. Around Smyrna vicious barrages again pounded the Southern lines. Brigadier General Manigault gave his blunt assessment of an incident that occurred on July 3. Four Federal batteries zeroed in on a Rebel battery earthwork, sending the cannoneers scurrying for cover. "It was not the first instance in which I had seen evidence of our artillery giving up too easily, and they began about this time to show too great [a] dread of the superiority which the enemy possessed over us in this arm." He characterized many gray cannoneers as becoming "unnerved" and "firing with little accuracy." "As a general rule, I think that our artillery was deficient. Many batteries were commanded by officers quite unfit for so important a command as a battery of light artillery. . . . The Yankees, if they excelled us in anything, did so in this branch, and their generals certainly seemed better to understand the uses of this weapon than did ours," he concluded. There were exceptions, Manigault noted, among them Dent's and Garrity's batteries.[49]

As the army continued to retrograde toward Atlanta, Johnston summoned his chief of artillery, who doubled in engineer affairs. Shoup was ordered to construct what would become known as the Chattahoochee River line. Comprised of above-ground, diamond-shaped wood forts, compacted with twelve-foot-thick earth walls, it would also have supporting artillery redans and connecting earthworks. A thousand slaves went to work on the project, and 20-pounder Parrott rifles were brought up from Mobile to add artillery weight. The six-mile line failed to impress either side. Federal engineers suspected that it would not stand under artillery fire. Rebel artillerymen "did not take [the line] seriously. . . . With us of the ranks, it was the occasion of great fun. We occupied it but never really used it," concluded Phillip Stephenson. The line was quickly neutralized by flanking maneuvers.[50]

An Illinois soldier related the details of an exchange that occurred on July 7:

> On the evening of the 7th, just dark, a Rebel battery [unidentified] in a fort which our guns had been bursting shells over all day, in half an hour did some of the most rapid work I ever heard. They

> first paid their attention to our batteries, then demolished some half-dozen wagons and 20 mules for the 4th Division of the 17th Army corps half a mile to our right, and then began scattering their compliments along our line. . . . They kept getting closer and closer to us, and finally, a shell burst in front of our regiment. The next one went 50 yards past us and dropped in the 40th Illinois. Neither of them did any damage, and no more came so close.[51]

"We were subject to a very heavy artillery fire yesterday morning, while building my works," Captain Dent informed his wife on July 7. "I had one man killed and another wounded who went to the Hospital—besides a third slightly wounded. Out of the ninety men who enlisted at Pensacola two and a half years ago—we have less than forty men left—and some of them are disabled by wounds. A man came back to the battery a few days ago who was wounded at Chickamauga—in fact two came back—neither of them fit for duty. . . . I expect the Yankee batteries will again open today. Sherman seems inclined to make this fight with artillery." Two days later he added: "We have been under a very heavy artillery fire ever since we occupied our present position—a fragment of a shell entered one of my embrasures yesterday striking the [muzzle] face of the piece injuring it slightly and slightly wounding six men.[52]

Sherman now attempted to operate against Johnston's communications. In mid-July, George Stoneman's Union cavalry brigade attempted to raid the Atlanta & West Point Railroad a few miles east of the Chattahoochee River. The men were checked at Moore's Bridge by a well-worked section of 3-inch rifles of King's Missouri Battery, supported by a dismounted Mississippi cavalry regiment. The panicked Federals fled back across the bridge.[53]

On the main battle line, the relentless and monotonous shelling of the opposing artilleries continued. Mississippi gunner E. T. Eggleston related in his diary:

> July 16: The enemy opened on us this evening with a battery of Parrott guns and got our range in 5 shots.
>
> July 17: We experienced the severest shelling today I ever underwent. One section of our battery . . . replied . . . and did some good shooting. An ambulance was seen carrying off wounded from the

> Y[ankee] battery & two of their embrasures were knocked to pieces.[54]

In one of the great missed opportunities of the war, Johnston allowed Sherman to trickle his divisions over the Chattahoochee River near Roswell, sixteen miles upriver from his position. The Chattahoochee line no longer being tenable, the Confederates retreated across the river and formed a new line on the south bank of Peachtree Creek, only a few miles from Atlanta. On July 17 came the fateful news from Richmond ordering Johnston's removal. The command of the army and responsibility for saving Atlanta now passed into the hands of General John Bell Hood.

12
"Those Brave Cannoneers"

Artillerists, as well as the entire army, viewed Johnston's removal with mixed reactions. Captain Key wrote that "every man looked sad and disheartened," and a private in Guibor's battery remembered that "the soldiers were very much depressed." Lieutenant Neal, however, confided that "I cannot regard it as a calamity." "One thing for certain," declared Captain Douglas. "Gen'l Hood will fight the enemy, and I believe he can whip them." Hood inherited an army of ten infantry and four cavalry divisions, some 57,600 troops, including 3,600 artillerymen. Anderson's Georgia Battery was detached and given to G. W. Smith's Georgia militia, a division now operating with the army.[1]

Ringed with formidable earthworks, Atlanta in March 1864 had several forts with a permanent armament of seven 6-pounders, seven 12-pounder howitzers, two Wiard rifles, and two 24-pounder rifles. That number was soon increased to twenty-eight pieces, mostly old cannon rejected by the army. Because no horses or limbers were available, these pieces could only be used defensively. To give some added punch to the line, fourteen heavy cannon were brought up from Mobile, nine of which were eventually mounted on the northern section of the defenses. Manning the guns were six depleted batteries from the Army of Tennessee that had been transferred to garrison duty. These companies were eventually merged into four—Scogin's, Baxter's, Rivers's, and Massenburg's—and placed under the command of the Georgia militia. Together they mustered only 135 artillerists. A skeleton force of mechanics, including J. H. Hudson's one-hundred-man artillery company, comprised of Atlanta Arsenal employees, supported them.[2]

On July 20, 22, and 28, Hood attacked and was repulsed in the battles of

Peachtree Creek, Atlanta, and Ezra Church. In each instance, the artillery was used on the tactical offensive over rugged terrain in the characteristic manner of the western artillery: following in the rear center of brigades. The results were predictable: limited and ineffectual participation.

At Peachtree Creek, Hood planned to overwhelm George Thomas's Army of the Cumberland as it moved across the creek. Toward that end, Cheatham (commanding Hood's old corps) was ordered to mass his artillery on his left so as to sweep the gap that had developed between the right of the Army of the Ohio and the creek, thus dividing Sherman's forces. Although given a role in overall planning, the artillery would be minimally utilized in tactical execution.

A section of the Washington Artillery unlimbered near a bridge at a bend in the river. Barely had they set up than they came under the fire of a hidden battery across the river. A well-aimed shot made a direct hit on piece No. 3, dismantling the gun and mauling two of the Louisiana cannoneers. The peppering shots of Union sharpshooters cut down others. Several cannoneers thought that Lieutenant Chalaron should not have accepted a duel and withdrawn sooner. Philip Stephenson recalled the fray:

> Our gun was placed directly along the left wall of the tobacco barn and Piece 3 to our left. We accepted the challenge of the opposing battery, and the duel began. It was an unequal contest. They had sharpshooters, more guns, and a concealed and (I think) fortified position. They could see every man of us. At that short range it became only a matter of short time. William Tutt, who rammed & sponged, and I, who loaded, found it certain death to stand up. So we crouched by the muzzle of our gun on either side, loading it in that position. We were several yards in advance of Piece 3, and to their right. In a very short time so many of us were killed and wounded that the order came to cease firing. We did not withdraw, however, and the enemy did not cease firing.[3]

Selden's Alabama Battery of Preston's battalion supported Walthall's division. The cannoneers dropped trail on an open field slope of a hill to the left of the Paces Ferry Road. Within minutes they were raked by artillery fire from several directions and had to change front constantly. "We could

only tell where the Yankee battery was by the smoke when they fired," explained one of Joseph Selden's men. As Major Preston started to direct the movements, he was killed by an incoming shell. At four o'clock Selden's men, their limbers emptied, withdrew and were replaced by Barry's Tennessee Battery. They, too, came under a galling fire, losing fifteen men and three horses before retiring at sunset.[4]

Even at this late date in the war, some officers were not beyond attempting obsolete maneuvers. Captain Thomas Key proposed to his battalion commander, Major Hotchkiss, that he "run up one gun at a time and load them with canister so as to mow down the Yankees lines when our troops charged." Hotchkiss consented, but Cleburne revoked the suicidal tactic.[5]

In the July 22 assault, the Battle of Atlanta, Hardee's corps made an exhausting night march south through Atlanta and then northeast toward what was believed to be the exposed Union left. The Washington Artillery, accompanied by Major Cobb, went so far astray that it actually came up on the enemy's reserve wagon train at Decatur. "Astonishing spectacle. Magnificent opportunity for cavalry or infantry. But what an astonishing situation for a battery of artillery," P. D. Stephenson observed. "I can see his [Cobb's] red head now as he disappeared around a bend in a road, flaming red, both cap and hair. The next moment he returned and ordered us to retire!"[6]

In the subsequent battle, terrain was again a factor. As Bate's and Walker's divisions deployed to advance, they became entangled in undergrowth and briar thickets. The Washington Artillery, the only battery to advance, soon came to a halt. In the initial assault, several Yankee batteries were overrun, and it appeared as though the enemy line would collapse. Some of Goldthwaite's gunners rushed up to the abandoned cannon and turned them on the retreating Federals.[7]

Captain Key, who the day before had replaced the wounded Major Hotchkiss as battalion commander, once again envisioned an outdated Napoleonic tactic. He ordered a section of Turner's Mississippi Battery forward to within two hundred yards of the enemy's works to open with canister. The lieutenant commanding the section initially refused to carry out the dangerous maneuver. Only after some arguing were the guns brought up. Key did not mention the incident in his official report, but he did note that the order was "very tardily done." Other artillery support continued to be lim-

ited and uncoordinated. Hoxton's battalion, initially with Maney's division, had no sooner unlimbered and opened fire when it was ordered to disengage and report to another part of the line. Lieutenant Neal believed that his battery "left before much was accomplished."[8]

The Confederates, expecting no resistance, had in fact run head on into Sweeney's division and one brigade of Fuller's division, backed by the Fourteenth Ohio Battery. Within forty-five minutes it was over. The five thousand attacking Confederates, battling an equal number of bluecoats, were lacerated by rifled fire and canister and forced back.[9]

The two-division flanking column had lost its punch before Hood belatedly launched Cheatham's and Stevenson's divisions. "My battery and Dent's advanced with the attacking column," wrote Captain Douglas. "We swept across the field and through the woods for three-fourths of a mile driving their advance from their works and pressing upon their main line of works. . . . Dent and myself got into position 400 yards from their works and opened with vigor on the enemy . . . while our batteries in our main line of works opened on the enemy at long range."[10]

The offensive role of the artillery, never particularly effective, was made even more difficult by the extensive use of entrenchments. Eldridge's battalion moved up in support of the attack and opened with long-range shelling. The results could not be seen, but the Federals were well dug in, and the effect proved minimal.[11]

Eventually the Federals made a counterattack that swept the Rebels pell-mell from the field. The limited role of the long arm was reflected in the casualty list. In Key's battalion only two men and nine horses fell as casualties. The Confederates dragged off a dozen light 12-pounders as they withdrew. One of these replaced an old howitzer in Key's battery that had graced the grounds of the Arkansas Military Institute prior to the war, and two others were swapped with two Confederate Napoleon-made guns in Swett's battery. Douglas's battery also received four U.S. Napoleon guns as well as most of the baggage of Battery A, First Illinois Light Artillery.[12]

After the Battle of Atlanta, a quick reorganization occurred. Lieutenant General S. D. Lee arrived to command Hood's old corps. Walker's decimated division was broken up and the brigades sent to other divisions. The artillery reserve was phased out at an army level and the battalions sent down

to the corps. A significant number of changes occurred in personnel. Brigadier General Shoup, who had never been satisfied with his artillery chief role, was replaced by Colonel Robert F. Beckham. Attempts to obtain him a brigadier's commission proved unsuccessful. Because the artillery reserve had been dissolved, Lieutenant Colonel Hallonquist replaced Beckham as commander of S. D. Lee's guns. Major Samuel C. Williams became a lieutenant colonel and assigned to A. P. Stewart's (Loring's old) corps. Lieutenant Colonel Felix Robertson departed the horse artillery to become a brigadier general of cavalry.[13]

Hood's failed attempt at Ezra Church on July 28 cost the Rebels an additional 3,000 casualties, compared to only 632 of the enemy. Although the artillery played only a limited role, Manigault recalled: "Artillery was now brought up, which opened heavily upon the enemy for fifteen minutes or more, doing, it is said, great execution (this we got from prisoners taken afterward), altho the artillerists and gunners could only guess at the position occupied by the hostile lines." A third infantry assault was mercifully aborted. "Our artillery continued for some time to cannonade the enemy in their position, which was feebly responded by theirs, either because their guns had not arrived, or they found much difficulty getting them into position," the brigadier concluded.[14]

On August 8, Sherman changed his flanking tactics and undertook formal siege operations. For twenty-eight days Union guns rained shot and shell on the city. "Generally they commence on this fort and throw around it shells and then elevate their guns and send the balance into the city," explained Lieutenant Neal. "For a while we exchanged shots with them, but where their batteries are as well protected as ours and the Yankees before us, about as much is made of artillery duels as the sledge hammer makes out of the anvil." On August 9 the crash of artillery reached a thundering crescendo. On that day a duel between eleven Federal and ten Confederate batteries lasted for hours. Many cannoneers fell at their posts from sheer exhaustion.[15]

As Sherman maneuvered his corps into various positions, the Confederate artillery shifted accordingly. On August 18 Captain Key noted: "This morning orders were received to be ready to move at a moment's notice, General Hood thinking that the Yanks were massing on our right in front of Atlanta. By noon, however, the enemy made their appearance on the ex-

treme left." He continued: "I ordered the batteries to throw shell in a thick woods in front of the position where the enemy had concentrated. The officers on picket duty reported that almost every shell would kill or wound a Yank, for they could hear the pitiful cries and friends calling for litter bearers. I kept up the artillery fire almost all night." Throughout the evening, the Northerners inched their works closer. Key ordered up a section of Parrott rifles from Garrity's battery. After firing only a few rounds, the Alabama gunners made a direct hit on a caisson a mile and a half distant.[16]

The soldiers became accustomed to the incessant pounding. After a seven-hour shelling on August 7, Major General French noted that little damage had been sustained. Artillery alone would be insufficient to bring Atlanta into submission. Interestingly, Hood's artillery during this time nearly equaled Sherman's. On the fifteenth the Federals had 216 guns. Even with three batteries absent with Wheeler's cavalry on a raid, Hood still had forty-four batteries with 172 pieces. The disparity between the opposing artilleries was in the supply of ammunition. On August 18, Hood's long arm averaged only 125 rounds per gun, as compared with nearly 400 in Sherman's artillery.[17]

The Rebels also mounted seven 32-pounder rifles on the line, brought up from Mobile, which were far bigger than anything in the Union armament and disabled several guns. Attested a Buckeye on August 1: "The Rebs have used a 64 Pn'dr. on us once in a while the past week. . . . It is a wicked looking thing and our boys have great dread of them [shells]. . . . One twenty lb. shot struck the works of the 23d Mo. on our right—exploded—wounded four men, once since died. Now the Rebs do not throw one shot or shell in twenty where it is aimed—they go either too far or fall short."[18]

Constant shortages continued to drain the Southern artillery. On August 18, Colonel Beckham's branch listed a dearth of 156 saddles, 691 halters, 316 bridles, 298 horse blankets, 548 currycombs, 541 horse brushes, and 17 sets of harness. The men remained pitifully short of clothing, including shortages of 1,935 coats, 1,974 blankets, 1,651 pairs of shoes, 4,564 pairs of socks, 1,710 haversacks, and 1,288 canteens. The inspecting officer noted that "on very few occasions have I seen articles of clothing issued to the artillery with the proper (red) trimmings for that branch of the service. In nearly every instance it has been the uniform of the infantry, although occasionally I have seen jackets with the artillery trimmings in the infantry."[19]

The condition of the stock became increasingly critical, threatening the mobility of the artillery. On August 18, 2,156 horses were on hand, of which 164 were unserviceable. The batteries thus averaged only fifty-one horses each. A shortage of long forage had always existed, but a recent raid on the Montgomery and West Point Railroad had now left both long forage and corn in short supply.[20]

Among several cavalry raids attempted during this time was one undertaken by Judson Kilpatrick's division against the West Point Railroad on August 17. After making several breaks in the track, one brigade of the blue troopers found themselves caught by Brigadier General Lawrence Ross's Texas cavalry brigade at Lovejoy's Station on the twentieth and cut their way out. In a daring display, Lieutenant George Young, commanding the crew of a single howitzer of Croft's Georgia Battery, defiantly worked his piece despite two messages from Ross the save his men. "Not while I have a shot left!" the lieutenant uttered. Thirty of the Texans remained to support him. "Our men stood manfully and fought like madmen," declared one of the Georgia gunners, who continued to fire canister rounds in several different directions as the Yankees swarmed around them. The crew had one killed and five wounded before abandoning its piece. "Lieutenant Young is one of the coolest and bravest men I ever saw under fire. Every one of his men stood by his piece," reported Ross.[21]

On August 25, Sherman's guns fell silent, and his armies went on the move once again. On the afternoon of September 1, the Federals attacked Hardee's isolated corps at Jonesboro, south of Atlanta. The Rebels had not even had time to complete their works. A solid mound of dirt had been thrown up in front of the Washington Artillery guns, but embrasures had not yet been cut. Time gave out, however, as the pickets came scurrying back shouting, "They're coming, boys." The gunners tossed away their friction primers for slow matches, because at such close quarters no chances could be taken. The Napoleons blasted a pathway through the dirt with solid shot. Fortunately, the attack turned out to be a feint. During a lull, Captain Slocomb suddenly spun around like a top, his shoulder having been struck by a sniper. Knocked breathless and his face turning pale, the captain was removed to the rear.[22]

The main attack came soon enough. Govan's and Lewis's brigades were

swept away, and Key's and Swett's batteries were overrun. A Mississippi artilleryman recalled the scene: "There were several lines deep in our immediate front in an open field. . . . We poured grape and canister into them cutting great gaps in their lines, but they closed them up with fresh men, and came on to the very muzzles of our guns." The batteries lost two 10-pounder Parrott rifles and six 12-pounder Napoleons. All but a dozen or so of Key's men fell captive, and Swett's company suffered similarly. Swett's battery was subsequently disbanded and the survivors formed into a small scouting troop.[23]

Hardee made good his escape, but because of the damaged railroads, Atlanta was doomed. Hurried last-minute efforts were made to salvage as much as possible. Colonel Melancthon Smith removed twenty-eight guns, but no harness or horses. Although he promised additional animals, none arrived. He therefore attached these guns to his regular command, with many teams having two guns, and thus got off about midnight. Hood's reserve ordnance train was blown up, the explosions being heard thirty miles away. Stunned ordnance officials later tallied the losses: ten fieldpieces, fourteen siege guns, thirty-three caissons, thirty-nine limbers, three traveling forges, twenty-five single sets of harness, and twelve artillery saddles. Even worse, some fourteen thousand rounds had gone up in smoke.[24]

For the next several days, Hood's discouraged army trudged southward. Lieutenant Colonel Hallonquist took the three reserve battalions and the batteries of the Georgia militia (eventually reduced to two companies of four howitzers each) to Macon for the defense of that place. Eleven batteries of forty-two guns thus departed the army.[25]

The lifeblood of the army had been shed in the defense of Atlanta. Confederate losses may have reached fifty thousand. Everywhere lay the grim signs of suffering. High losses had often managed to elude the artillery, but no longer. On April 1 the twenty-seven batteries totaled 2,861 men present for duty, or an average of 106 per company. On August 31 the same batteries numbered 2,395, or 89 per company—a net loss of 16 percent. From a June 10 high of 4,619 men, the long arm dropped to 4,123 by August 31.[26]

The artillery also suffered a leadership loss. On August 31, 199 officers remained, a loss of 52 since June 10. By the end of the campaign, the casu-

alty list read like a "Who's Who" among artillery officers. Major W. C. Preston and Captains Thomas Stanford, J. W. Mebane, John Ward, and McDonald Oliver were dead. The wounded included Majors John W. Johnston and Thomas Hotchkiss, as well as Captains L. G. Marshall, James Garrity, Max Van den Corput, Frank Gracey, Henry Guibor, and C. H. Slocomb. Sickness had removed from service Major James Waddell and Captains Joseph Selden, J. B. Rowan, and William Jeffress, the last due to hemorrhoids. On August 17, Major Robert Martin was listed as "absent without leave." Half of the battalions experienced some turnover in command.[27]

The campaign also proved to be a logistical catastrophe. Colonel James Kennard, Hood's new ordnance chief, frantically searched for artillery saddles and harness. On September 23, Josiah Gorgas, the chief of ordnance in Richmond, came to his assistance by sending him saddles from the Mount Vernon Arsenal and one thousand sets of harness from Richmond. In late September the Augusta Arsenal was requisitioned for four thousand fixed rounds. Colonel Rains wrote Kennard that he could ship them at the rate of twelve hundred per week. There was simply no way that the Army of Tennessee could begin to match the Union ammunition expenditure evidenced during the campaign—150,000 rounds. More belt-tightening lay ahead. On September 15 an inspector penned an endorsement, ironically on the back of Captain W. C. Duxbury's glowing report of the previous April: "Artillery not now in as good condition." The ammunition was down to a scant 106 rounds per gun. The need for horse brushes was so serious that the men fabricated makeshift brushes from horse hair.[28]

The loss in cannon, though heavy, was not crippling. Since May at least eight guns had been disabled and thirteen captured (see table 10). These losses were offset by the capture of a dozen light 12-pounders and 3-inch rifles. The Confederates abandoned eighteen field and twenty-two siege guns, mostly in the fixed fortifications at Reseca, Rome, and Atlanta. Hood, nonetheless, still had more guns than he could logistically support. The horses of the reserve battalions had been removed and redistributed among the remaining battalions. Even then a dearth remained. By September 20, Hood's nine battalions counted 1,213 horses, or an average of 44 per battery. All the guns and caissons were reduced to four animals each. More drastic measures had to be taken. Two caissons from each company were turned in and replaced with mule wagons.[29]

Table 10. Captured and Disabled Field Guns, September 1864

	Disabled	Captured
Reseca		
Washington Artillery	2	
Van Den Corput's Georgia		4
Cassville		
Hoskins's Mississippi	1	
Dallas		
Washington Artillery	1	
Kennesaw		
Turner's Mississippi	1	
June 22		
Croft's Georgia	1	
Chattahoochee River		
Dent's Confederate	1	
Peachtree Creek		
Washington Artillery	1	
Lovejoy's Station		
Croft's Georgia		1
Jonesboro		
Key's Arkansas		4
Swett's Mississippi		4

In short, the Atlanta campaign had permanently crippled Hood's artillery. In command, organization, number of guns and horses, equipment, manpower, and ammunition supply, it was left a hulk of the structure that Johnston had molded five months earlier. Never again would it be able to compete with its powerful Northern counterpart on anything like an equal footing.

13
The Final Campaign

On September 19, 1864, Hood moved the battered Army of Tennessee to Palmetto Station on the Macon Railroad. Never had the situation appeared so bleak. Shortages of food, clothing, shoes, and ammunition intensified. George Jones noted that the horses in Stanford's battery "seem to be affected with a curious disease." The total effective force of infantry, cavalry, and artillery had dwindled to slightly more than thirty-nine thousand. Captains Dent and Douglas remained optimistic, but Captain Key expressed the sentiments of many when he wrote: "Something must be done in the way of generalship, for we have not the force to meet them."[1]

Recruitment in the artillery had also come to a standstill. On September 20, Hood's thirty-two batteries mustered 2,695 men, an average of only 84 effectives per company. Key was fortunate in receiving eighteen Arkansans from Swett's now-defunct company. Marshall's Tennessee Battery obtained twenty-six conscripts from eastern Tennessee, only to have twenty-four of them desert within days. Barry's Tennessee Battery turned over its guns, horses, and equipment to Darden's and reported to Macon. Anderson's battery was retained by the Georgia militia, and Gracey's was detached for service with the now-mounted Kentucky brigade. Three batteries of the horse artillery remained absent with Wheeler.[2]

Major Daniel Trueheart, a thirty-three-year old Virginia-born soldier, arrived from Mobile to command Preston's battalion. A graduate of the Virginia Military Institute, where he later taught math for two years, Trueheart had formerly served as Stonewall Jackson's chief of artillery, with whom he had been a personal friend. Jackson nonetheless preferred charges against the major for drunkenness and insubordination during the Valley cam-

Table 11. Hood's Reorganized Artillery, September 1864

Battalion	Napoleons	Howitzers	Rifles
Hoxton	12		
Bledsoe	12		
Cobb	8	4	
Trueheart	8	4	
Storrs	10	2	
Myrick	12		
Johnston	12		
Eldridge	8	4	
Courtney	8	4	
Calloway (Horse)		4	4
Waite (Horse)		8	

paign. The issue was never pressed, and Trueheart was banished to the west. He served on several staffs and eventually returned to artillery command.[3]

On September 20, Hood's reorganized artillery comprised a compact nine battalions, each with three four-gun batteries. In addition, two reduced battalions of horse artillery manned sixteen guns. The armament totaled 124 pieces, including 90 12-pounder Napoleons, 12 12-pounder howitzers, and 22 rifles, mostly 10-pounder Parrott rifles and 3-inch rifles (table 11). There were now five guns per thousand effective infantry, as compared with Lee's nine per thousand at the time.[4]

On September 25, President Davis arrived at Palmetto, Georgia, to review the Army of Tennessee and confer with Hood. During the inspection, Davis, accompanied by Major General Cheatham, passed Stanford's battery. "Here's the battery I have been telling you about," remarked Cheatham, referring to the unit as "Old Reliable."[5]

A significant structural change occurred on November 14. Special Orders No. 34 abandoned the regimental artillery organization and reverted to the old division-level structure. Under this setup, each battalion was assigned to and operated with a particular division on the march. This necessarily diluted the executive authority of the corps artillery chiefs, although this was officially denied.[6]

A major command change occurred in late September when the disen-

chanted Hardee transferred out of the army. Hood's three corps commanders were now Benjamin Cheatham, S. D. Lee, and A. P. Stewart. A shake-up also occurred in the artillery. On September 8, Major General Arnold Elzey arrived as the new army chief of artillery, replacing Robert Beckham. Although Elzey was a West Pointer with service in the U.S. artillery, it was unique to appoint so high level an officer to that position. For some months, Bragg and Lee had toyed with the idea that the artillery corps of the Army of Northern Virginia was equivalent to a division and merited a major general. Lee even considered Elzey for the position in the spring of 1863, "if his health [from a head wound] and habits do not interfere." The last appears to have been "army talk" for alcoholism. He was instead assigned to the Department of Richmond, but was bumped when Lieutenant General Dick Ewell received the post. Elzey's reassignment to the western artillery may have been his only remaining option. At any rate, one more Virginia transfer had abruptly stepped into the top artillery position in the Army of Tennessee.[7]

Hood now decided to strike out for the Tennessee River, move to capture Nashville, and then invade Kentucky. It was precisely what Davis longed to hear. Hood was determined to seize the initiative not by direct battles with Sherman, which had clearly failed in the past, but through maneuver. The campaign began on September 29–30 as the army crossed the Chattahoochee River west of Palmetto, Georgia. Hood later contended that his invasion plans included a large reserve of artillery to overcome any opposition by the Federal gunboats in crossing the river. Yet none of the reserve battalions came up from Macon, and the army's artillery was, in fact, now weaker by a third.[8]

By October 11 the army had crossed the Coosa River and was marching toward familiar ground around Reseca and Dalton. Only one battery accompanied each division. Major General Elzey took the bulk of the artillery on to Jacksonville, Alabama, the army's new base of supplies. The infantry column arrived at Gadsden, Alabama, on October 20, where they reunited with the batteries.[9]

On October 27, Hood's army approached the five-thousand-man Union garrison at Decatur, Alabama; the small garrison proved tenacious. At two o'clock the next afternoon, a regiment made a sortie on the slight works of

Darden's battery. Although overrun, the position was soon retaken. Darden bitterly complained: "Had the works been constructed [and] finished before I took position the day's work would not have been so disastrous to my command. I had two men killed and nineteen wounded. Two ammunition chests exploded, three wheels shot down, and four poles shot off. I took forty men and non-commissioned officers into the position and lost 21 killed [and] wounded. These were our best men."[10]

At least one unidentified Confederate battery, perhaps two, became engaged with a pair of Union gunboats at three o'clock. A direct hit on a caisson left seventeen men dead, claimed the Union commander. "They [Southern cannoneers] deserted their guns, a portion of them retreating to their main line, while many of them rushed down the bank and sought the protection of the trees at the water's edge. The guns of the boats, double shotted with canister, were turned upon them at a distance of scarcely 300 yards, and poured in a terrible fire. Many bodies were afterward found in the river," he reported. Hood opted to bypass the position and cross the river elsewhere.[11]

Even had the weather cooperated, which it did not, the army was simply ill-prepared for a rapid offensive so far north. On November 4, Major E. H. Ewing, inspector of transportation for the Army of Tennessee, stated that "360 artillery horses would be required to supply the places of those broken down and that could not move. No horses being in reserve, they have put 240 mules received from Paxton in the gun carriages in place of horses; the remainder will, I suppose, be taken from the different wagon trains unless it is determined to leave some of the artillery at this point. Many of the horses not condemned are so poor and weak that I fear unless the weather and roads are very favorable, we will have to leave some of our guns in Tennessee."[12]

In early November, the army arrived at Florence, Alabama, although it would be mid-month before the engineers completed a pontoon bridge to cross the Tennessee River. Writing to his mother on the twelfth, a Georgia infantryman noted: "We are having fine weather now, pretty cold, as the men most of them are without blankets. The river is rising and has been for a week. We would have been on our way now but for our pontoon being too short."[13]

Forrest's cavalry, which would replace Wheeler's and operate on Hood's

left flank, was painfully slow in coming up. The guns became mired in mud, and on one day, Morton's battery covered only 2 miles. "The artillery horses were unequal to the task of pulling the heavy guns for any great distance, and they were supplied from the lead horses of the officers and those of the servants," explained Captain Morton. "These in turn being hitched sixteen to one cannon—oxen replaced horses eight to a gun. The animals were impressed from citizens along the route."[14]

Nor could Hood gather sufficient artillery to protect his railhead at Corinth. On November 15 three batteries from the reserve artillery at Macon were requested as a garrison force, but none could be spared. Hood promised to send two batteries from the army on the eighteenth. Major J. W. Eldridge arrived, but with no guns. By the end of November, only Captain Thrall's battery from Forrest's cavalry had arrived. Eldridge reported that a minimum of sixteen guns would be necessary. Even then, only half the emplacements would be occupied.[15]

The army advanced to Columbia, Tennessee, via Waynesboro. Cheatham's corps was on the direct road, the other two taking somewhat parallel roads, with Forrest's cavalry in the lead on the flank. The column plodded through deep mud, impairing the artillery. The roads at times became "so bad that it was almost impossible for the artillery to move at all, the teams being very poor and greatly exhausted from constant and excessive service," reported Major General Edward C. Walthall. "Until we struck the old Nashville road heavy details (sometimes one, and often two regiments) were required to move with the artillery to assist in getting up hills."[16]

As Hood advanced, General John M. Schofield's two corps, some twenty-five thousand strong, moved to Columbia to delay the Confederates and prevent them from reaching Nashville before Union reinforcements arrived. Rebel infantry reached Columbia on November 24, only to find the Yankee guns dug in south of town. Hood now devised an elaborate plan in which he hoped to entrap Schofield. S. D. Lee, with two divisions and nearly all of the army's batteries, would remain on the south bank of the Duck River and occupy Schofield with artillery demonstrations. Hood, leading Forrest's cavalry and the rest of the infantry, would cross a pontoon bridge upstream to reach the Federal rear and Spring Hill. One battery accompanied each corps—the Washington Artillery and Guibor's. Orders directed that only the best horses would be used on the march, with one ordnance wagon per

battery and no caissons. In addition, Trueheart's battalion would leave one officer per battery and all the drivers at Columbia, while the balance of the men accompanied the flanking column. This was done to man any captured batteries.[17]

The lion's share of Hood's artillery thus settled in for the task of pinning down Schofield at Columbia. Throughout November 29, Rebel batteries pounded away at the Union defenses, but not without taking losses of their own. A Union round made a hit on a caisson, very nearly killing S. D. Lee. The most serious loss of the day was Colonel Robert Beckham. A shell struck a large boulder, hurling a fragment of rock into his temple, leaving him mortally wounded. "He lingered in great agony for a few hours," observed an artilleryman.[18]

Meanwhile, the artillery accompanying the column had been facing problems of its own. A wheel in Guibor's battery shattered when it struck a boulder. Nor did the spare wheel fit. A wheel was thus appropriated from a nearby farmer's wagon. It proved to be a makeshift arrangement, but the battery limped along. Yet to no avail. Schofield detected Hood's movement and detached one division and his reserve artillery to Spring Hill. After sparring with the Federals, Hood camped his troops short of the crucial road. Schofield, now thoroughly alerted to his perilous situation, withdrew all his troops through Spring Hill to Franklin.[19]

An angry Hood pursued the next morning with the corps of Cheatham and Stewart. Despite the formidable Federal position at Franklin, Hood determined to attack. The precise role of the artillery in the subsequent battle has long been disputed. The popular notion is that the bulk of the artillery was still coming up from Columbia. These few that were present were not engaged for fear of hitting civilians in the town. Evidence points to the contrary. Union general Jacob D. Cox claimed that during the assault, he personally observed Confederate artillery "in the intervals galloping forward." Captain Douglas confirmed this, stating that his battalion (Courtney's) and one battery from Hotchkiss's battalion were engaged. Courtney's battalion even reported three killed and seventeen wounded. Morton's battery fired a few rounds into the Federals on Figuers Hill. Contrary to his later recollections, Hood did use some artillery at Franklin. Yet, he seemingly ignored the fact that the tightly packed Union ranks were vulnerable to an enfilade fire, and he instead relied on the shock effect of an infantry assault.[20]

At four o'clock the Rebel infantry advanced, with predictably disastrous results. Some sixteen thousand infantry were hurled over a comparatively level plain offering little cover. More than sixty-two hundred fell under a murderous infantry and artillery fire. A few hundred of Cheatham's men breached the line, but were quickly driven back by a Union counterattack. Hood's expressed sensitivity for the town did not prevent him from positioning his batteries that evening and ordering a heavy barrage for early the next morning. During the night, however, Schofield pulled his army back to Nashville.[21]

The devastating loss of infantry officers at Franklin has long been noted. What has not been recognized is that the artillery, despite its minimal use in the campaign, was also undergoing a leadership crisis. Upon the death of Colonel Beckham, the ranking officer in S. D. Lee's corps was Major Alfred R. Courtney. He was on furlough, however, and would not return until the campaign's end. The second ranking officer was Major John W. Eldridge, but he was on detached duty at Corinth. Command of Lee's artillery fell to the one remaining field officer, twenty-five-year-old Major John W. Johnston. This meant that all three battalions were commanded by a captain and two-thirds of the batteries by lieutenants. On December 10, Major Llewellyn Hoxton, a competent but unspectacular officer, was promoted to lieutenant colonel and transferred from Cheatham's corps to the command of Lee's artillery. Sickness also took its toll. Major Robert Cobb left the army due to illness. His successor, Captain Slocomb of the Washington Artillery, was absent sick. Command of the battalion thus went to Captain René Beauregard, who, despite his youth, was the senior officer remaining.[22]

Hood now considered several alternatives. Clearly his army had been shattered in the murderous assault at Franklin. In early December his effective force was listed at twenty-three thousand, a net loss of seventy-five hundred since Florence. The effective artillery in Stewart's and Lee's corps was 740 and 635, respectively, for an average of only 76 per battery. Nor would the situation improve. From the time Hood entered Tennessee until the Battle of Nashville, the army received 164 recruits, only one of whom went to the long arm.[23]

Perhaps unaware of the massive Union strength (seventy thousand) that lay in wait at Nashville, Hood decided on perhaps the least attractive of his options. He would move his army up to the hills south of Nashville, form

an entrenched line, and wait for the Union commander, General George Thomas, to make the next move. Before advancing, Hood ordered S. D. Lee to leave behind Marshall's Tennessee Battery at Columbia because of a shortage of horses.[24]

Only with major difficulty was the artillery able to continue its journey to Tennessee. "The ground is so soft that my carriages mire up to the hubs and my horses are so jaded that we have had to abandon two on the roadside," lamented Captain Key on December 1. As the battered Army of Tennessee reached the outskirts of Nashville, Hood deployed his troops. The heavy artillery of one of the forts opened on Key's battery as it unlimbered, making several close shots. In sharp contrast to the twenty miles of extensive works and a half-dozen forts of commanding elevations, the Southerners threw up four miles of trenches. Lee's corps held the center astride the Franklin Pike, Stewart's the left, and Cheatham's the right.[25]

On December 4, Bate's division, accompanied by the Washington Artillery, attempted to take Murfreesboro. The Louisiana gunners opened fire on a stout blockhouse guarding the Nashville & Chattanooga Railroad. Seventy-two rounds were expended, thirty-one of which struck, although none made an interior penetration. By mid-afternoon the Federals began to receive reinforcements. The Thirteenth Indiana Cavalry attempted to make a charge across the Nashville Turnpike bridge of Overall Creek. Lieutenant A. J. Chalaron shifted his section to meet the threat. A double-shot of canister from piece No. 4 managed to inflict a number of casualties, breaking up the assault. Indeed, the gunners claimed twenty fresh mounts for their battery. Bates later greeted Chalaron with the words: "You have saved my division." The Frenchman replied simply, "I know I have."[26]

On December 8 the mercury plunged, and a mixture of sleet and snow fell during the night. By the next day, a sheet of snow and ice covered the ground. The temperature plummeted to a bitter ten degrees. "Our artillery carriages are frozen in the ground, and ice half an inch thick coats my brass guns," stated Captain Key.[27]

Fog and campfire smoke blurred the morning of December 15, 1864, making visibility nearly impossible. By eight in the morning the sun had burned off the haze. At mid-morning the huge siege guns of Fort Negley opened with a resounding roar. The shots passed over the earthwork of the Wash-

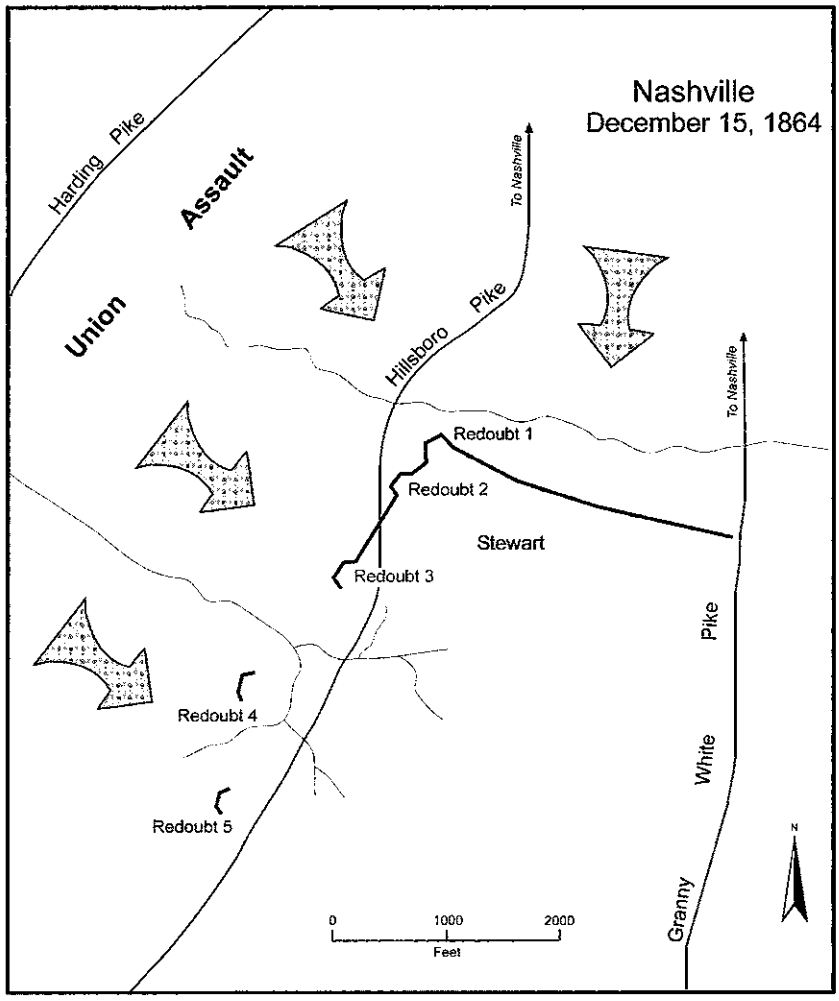
ington Artillery and, according to a cannoneer, "came near stampeding the mules that were hitched to our caissons." Guns from four other forts soon added their armament, making for a fearful barrage that appeared preparatory to an infantry assault.[28]

At ten o'clock that morning, the Federals, in division strength, attacked Cheatham's far right near the Nolensville Pike. "Being in command of four batteries, I sought our Captain Goldthwaite, who was nearest the enemy, and in a few minutes a brisk fire was going on in our front," Captain Key stated. "When a colored brigade, led by white officers, was within 200 yards of our line, our batteries opened on them and they were routed in ten minutes." By noon, Cheatham's men had repulsed the attack.[29]

The assault on the right turned out to be a feint. At ten o'clock a massive Union wheeling movement moved against the Rebel left. The left extended from the Granny White Pike to the Hillsboro Pike, taking a right-angle turn at the latter to protect the rear of the army. Beginning at the salient and stretching south of Richmond Creek were five redoubts manned by Trueheart's battalion. Redoubt No. 1 comprised two guns of Selden's battery, Redoubt No. 4 two guns of Tarrent's battery, and Redoubt No. 5 Lumsden's four Napoleon guns.[30]

Stewart's corps was hit from the north and west. One of Lumsden's men recalled the panic in Redoubt No. 5. "I ran towards Captain Lumsden's section, where Sergeant Jim Rose had turned No. 2 to fire canister at the Federals who were near gun No. 4," he wrote. "He called to me, 'Look out, Jim!' I dropped on hands and knees whilst he fired that canister right over my head. I took my place between his gun and the embrasure, helping handle the gun, and he gave the double charge canister again." Lumsden gave the command to fire at one gun, but the man with the friction primers had run away. The captain had little choice but to yell, "Take care of yourselves boys!"[31]

The Yankees now turned Lumsden's captured guns on Redoubt No. 4. Major Storrs took personal command. "The enemy soon began to appear in two lines of battle on our immediate front and we poured shell and solid shot on them heavily, causing them to halt," related one of Tarrent's cannoneers. When the bluecoats came up the pike from the rear, the order came to limber up. The two guns moved four hundred yards through a muddy



field, where two horses tumbled dead. It proved impossible for the remaining four horses to remove the piece, so it had to be abandoned.[32]

By four thirty Stewart's line had been smashed, and the army streamed back in disorder toward the Granny White Pike. An early nightfall ended the fighting. The Yankees claimed the capture of sixteen guns. Major Trueheart's battalion had been virtually destroyed, losing ten of twelve pieces.

Cowan's Mississippi Battery was likewise overrun. A member disgustedly related: "The infantry ran like cowards and the miserable wretches who were to have supported us refused to fight and ran like a herd of stampeded cattle."[33]

That evening, Hood pulled his army back two miles to the south. Working throughout the night, his men threw up a hasty, but continuous, line of works. Lee held the right, his line forming a salient at Overton Hill, Stewart's battered corps the center, and Cheatham's corps the left, using Shy's Hill as a salient. Hood's new position proved precarious at best. Only fifteen thousand infantry manned a line three miles in length. The remaining artillery was also spread thin. Lee had twenty-eight guns, Stewart eighteen, and Cheatham thirty-four, a total of eighty pieces. Worse yet, because of the darkness and muddy cultivated fields, some of the batteries could not be placed in line.[34]

On the morning of December 16, Thomas unleashed his powerful long arm. The Overton Hill sector was pulverized by six batteries for two hours. Lieutenant Colonel Hoxton noted that he lost two caissons and a number of horses in rear positions. In their anemic return fire, his cannoneers did succeed in disabling two guns of Battery B, Pennsylvania, but little else went their way.[35]

Edward Johnson's division, in the right center, was taken in reverse by three batteries of Kenner Garrand's division. "It has never been my fortune to witness so accurate and effective artillery firing as was exhibited by our batteries from this point," boasted a Federal battery commander. "The enemy had four batteries, with an aggregate of seventeen guns, bearing upon our three batteries and yet so terribly effective was our fire that the rebel cannoneers could not be induced to work their guns, and three of the four batteries remained silent most of the day." Johnson conceded that the Union artillery fire was "the most scientific" he had ever witnessed. A captured Southern artillery sergeant claimed that his battery lost twenty-seven men and twenty-three horses during the barrage.[36]

Carter Stevenson's division, to the right of Johnson's, was struck by "an artillery fire which I have never seen surpassed for heaviness, continuance and accuracy," declared the division commander. A lieutenant in Rowan's battery later recalled that "the nature of the ground was such that the horses could not be effectively sheltered from the enemy's battery on the right, and

they were falling rapidly. The drivers were being wounded, and trees cut down, while the air was resonant with the howl of passing shells." At twelve thirty a shell fragment struck and instantly killed twenty-nine-year-old Captain John Rowan. His body was left on the field.[37]

At three thirty the Federals launched a furious assault with four brigades against the Overton Hill salient. Only two batteries were positioned atop the hill—Stanford's facing north toward the Franklin Pike and the Eufaula Light Artillery on the southern portion of the hill facing east. They, along with their infantry supports, succeeded in bloodily repulsing the bluecoats.[38]

The real action of the day occurred at four o'clock, when Thomas launched a massive assault on Hood's left. The XXIII Corps swarmed across Sugartree Creek from the west, the XVI Corps from the north, and James H. Wilson's ten thousand cavalry from the south. Early that morning Captain René Beauregard placed a section of howitzers on the eastern slope of Shy's Hill. Major Trueheart brought up the remaining section of his battalion and positioned them next to Beauregard's section. Turner's battery later arrived on the crest. The eight smoothbores proved totally insufficient to repulse the blue tidal wave approaching. Within minutes, Cheatham's corps literally disintegrated, losing a staggering twenty-five guns in the process.[39]

"On the hillside facing east, in rear of the position held by Bate, was Major Trueheart with a section of artillery, all that remained of his battalion, in command of his gunners, cool and deliberate, directing the fire of his guns into the advancing and victorious enemy, until he was surrounded and captured and his guns turned on the retreating Confederates," declared a major. "Trueheart and his brave gunners, facing the enemy and intently serving his guns, his battalion colors flying while surrounded and captured, was the historic figure on that historic field."[40]

Cheatham's routed men ran pell-mell toward the Franklin Pike, spreading panic in both Stewart's and Lee's corps. For Alfred Courtney's battalion, it proved a repeat of Missionary Ridge. Dent's battery was overrun and all four guns captured. Garrity's battery lost two of its guns; Douglas abandoned one. "Closer and closer they came. We began to give them double-shotted loads of canister direct in their faces. . . . Just then somebody shouted, 'Look to the west!' and, turning in that direction, we saw that the old fields far to the southwest were covered with a mass of Confederate

soldiers fleeing diagonally across our rear . . . the only way open to retreat," explained a Texas redleg. "With lighting celerity under orders from Captain Douglas, our battery horses were brought forward, and we succeeded in escaping with the loss of two [one] of our artillery pieces."[41]

Major John W. Johnston had Rowan's and Van den Corput's batteries on line. Rowan's men stayed at their posts to the last and poured "a heavy fire of canister at the solid masses approaching in front." It proved to be a vain contest. The victorious Federals swept over the muddy trenches and planted the Stars and Stripes on gun No. 2. The battery lost all four pieces, as well as four killed, eight wounded, and sixteen captured. A cannon in Van den Corput's battery was disabled when it drove at full speed against a tree, smashing the carriage.[42]

Stanford's battery of Eldridge's battalion was also overrun. "Stanford's guns were run out of the works but in the mad rush the horses were stampeded and only enough were secured to carry off one caisson," reported Captain Charles Fenner. Brigadier General J. T. Holtzclaw wrote that Stanford's battery had hardly a single good wheel remaining, so damaging had the Federal fire been. The company lost all four guns, and twelve men were killed and wounded.[43]

The remaining two guns of the Washington Artillery had been positioned on a terrace that ran parallel to and far in the rear of Loring's division. Seeking to save his section, Lieutenant Chalaron had his men gather up as many stray horses as they could and attach them to the limbers. He implored escaping infantrymen to manhandle the guns up the hill, but to no avail. The Louisianians thus disabled their own guns and fled.[44]

S. D. Lee formed a patchwork line of two hundred infantry backed by artillery. He rode up to Captain Fenner and asked: "Captain, have you a serviceable battery?" Fenner had just observed the Eufaula battery moving to the rear and pointed to it. "Bring that battery here at once," Lee shouted. Twelve pieces were eventually assembled and, according to Lieutenant Colonel Hoxton, "were immediately placed in position and used with good effect in protecting the retreat of the army."[45]

The defeated Southerners continued southward, sullenly retracing their steps to Columbia. The debris strewn roadside told the story: broken-down wagons, discarded small arms, abandoned baggage. Even before the army reached Columbia, the gunners of Marshall's battery, stationed at that place,

expected the worst. "Whole droves of artillery horses—ready harnessed, but starving and covered with mud—traversed the roads," observed one of them. After rounding up strays, the battery counted eight to ten horses per gun and caisson. Marshall then unlimbered one section at the pontoon bridge and the other section at the railroad bridge with orders to "fire on our own men in case they should run over the little infantry guard placed at those points."[46]

Constant rearguard actions marked the next ten days. More artillery was lost. On December 17, a Yankee cavalry dash captured the three remaining guns of Douglas's battery. "They destroyed the harness and had to cut down the guns, and when we recaptured them we could not carry them off and were compelled to abandon them," explained Hoxton. The men of Fenner's battery buried three of their guns by the roadside at Murfreesboro and two pieces of the Eufaula battery were left at the Duck River because the pontoon bridge had already been removed.[47]

Hood's army crossed the Tennessee River near Florence on December 25–26. A brief scare occurred when, in the midst of crossing, two Federal gunboats appeared five miles below the city. A. P. Stewart dispatched the one remaining gun of Hoskins's battery, the two guns of Cowan's battery, and Marshall's battery to take care of the matter. The guns unlimbered behind a hastily constructed earthwork on the north bank and opened fire, driving the vessels away. Some have concluded that the gunboats could have punched their way through had they been more aggressive, but Hood could, and surely would, have thrown all available artillery into the action had they done so.[48]

Hood, typically, attempted to minimize the disaster. Although admitting the loss of fifty-four guns, he claimed that an adequate number remained. Postbattle rhetoric could hardly hide the fact that the western long arm, as with the army as a whole, had been virtually destroyed at Nashville. Yankee ordnance officers tallied sixty-four captured pieces (forty-nine 12-pounder Napoleons, ten 12-pounder howitzers, two 10-pounder Parrotts, one 3-inch rifle, and two 6-pounders), seventy-five limbers, twenty caissons, and six wagons filled with artillery ammunition. Forty-five of the cannon were of Southern manufacture, mostly government-made Napoleons, and the remainder were of U.S. make. At least seventeen pieces had been abandoned in the days following the battle.[49]

Before advancing into Tennessee, Hood counted 124 guns, but by December 21 only 59 remained. Compared to Bragg's 30 percent artillery loss at Missionary Ridge, Hood had sustained a 50 percent loss. The depth of the disaster went beyond numbers. Many of the army's batteries—Douglas's Texas, Lumsden's Alabama, Tarrent's Alabama, Selden's Alabama, the Eufaula Light Artillery, the Washington Artillery, Fenner's Louisiana, and Hoskins's Mississippi were for all intents and purposes wiped out as fighting units. Gone, too, were some of the artillery's best officers: Colonel Robert Beckham dead, Captain John Rowan dead, and Major Daniel Trueheart captured. Immediately after the battle, only seven field officers remained, and one of them, Major Samuel C. Williams, had been painfully wounded.[50]

During the early days of January 1865, the debris of Hood's shattered army collected at Tupelo. Some of the batteries, their horses totally broken down, barely made it in. Only about eighteen thousand effective infantry and artillery remained. Although Hood had lost half his artillery, he informed his nominal department superior, General Beauregard, that there had been "no material loss since the battle of Franklin." The Creole later arrived at Tupelo and, stunned at what he found, declared Hood's command "no longer an army."[51]

The artillery was but a hulk of its former organization. "I called at General Elzey's office to talk about reorganizing the artillery of this army," explained Captain Key on January 17. "So many guns were lost at Nashville and so great a number of horses were killed or starved on the retreat that all the companies cannot be furnished, and as a result many batteries will have to be consolidated." Captain Douglas hoped that long-overdue furloughs might be forthcoming, but considered it more likely that "we will be supplied with guns before the spring campaign sets in."[52]

Unlike the disaster at Missionary Ridge, however, no reserve supply of guns existed. All of the obsolete bronze pieces had already been melted down and recast into Napoleons, and production at the government foundries had been shut down for months. The artillery was thus largely broken up and scattered across the western Confederacy. More than half of the batteries, those without guns and caissons, went to Mobile to man the artillery, both field and heavy, in fortifications at that place. Colonel Smith and Lieutenant Colonel Hoxton accompanied the column.[53]

Two battalions, Key's and Johnston's, pieced together enough ordnance and horses and accompanied the remains of the infantry via Columbus, Mississippi, and Selma, Alabama, to Augusta to oppose Sherman's army. A slight organizational shift was made to honor a request by Beauregard. His son's South Carolina Battery was thus exchanged with Rowan's, which went to Mobile.[54]

The batteries remained in Columbus for five or six days of rest. Colonel Smith organized a single good battalion of twelve guns, while his remaining eight pieces went to Mobile. Key's and Goldthwaite's batteries boarded river steamers on January 25, the horses going cross-country. At Dempolis, Alabama, forty of Goldthwaite's men were furloughed. The column arrived at Columbus, Georgia, on February 4, where Key "gave a brief history of the three batteries and the many battles through which they had fought" to a gathering of ladies.[55]

The battalion reached Macon, Georgia, by rail on February 5. While at that place, Key visited with the army's former artillery chief, Lieutenant Colonel Hallonquist, who had been piddling away his time there since the fall of Atlanta. Key learned that he would now be placed in a new battalion under Captain W. C. Jeffress. The battalion remained more than a week in Macon to give the horses time to rest. Repairs were made and guns remounted on carriages. The battalion finally started to Augusta via Milledgeville, where the guns had to again be disassembled and sent by rail because of the weakness of the animals.[56]

The infantry, some ten thousand troops, meanwhile arrived in Charlotte, North Carolina, and Newberry, South Carolina. Hood had by now been replaced, and his successor, Joseph E. Johnston, attempted to patch together a hodgepodge organization in an attempt to halt Sherman's relentless drive. By February 3, the batteries of the Army of Tennessee had still not arrived at Augusta, although they were expected shortly. The other two battalions trailed ten days behind.[57]

Actually, Johnston had more batteries than he could logistically support. His artillery included a heterogeneous mixture of companies from Charleston, Savannah, Wilmington, the Army of Northern Virginia, and Wheeler's horse artillery. The thirty field batteries would eventually be consolidated into ten. Beauregard was informed in early March that most of the artillery of the Army of Tennessee had been sent to Mobile and that five batteries

went to Demopolis. The department head wired Chief of Artillery Elzey on the eighteenth that all of the Demopolis batteries should be sent to Macon, where they would be reequipped and reorganized.[58]

The only batteries to make it as far as North Carolina were those of Johnston's battalion. They arrived at Salisbury on April 12, in time to discover that an estimated two thousand Federal cavalry were approaching the town from the west. The battalion, with no infantry support, set up across a small stream several miles from town. Johnston foolishly attempted to cover all three roads leading into town, thus stretching his guns for four and one-half miles. The blue troopers attacked the next morning, quickly swarming over the scattered batteries, capturing all of the guns and half of the men. One of the redlegs believed it to be ironic that a battalion that had fought with such distinction in many campaigns would be wiped out "in an obscure skirmish."[59]

By April 17 the balance of the Army of Tennessee's artillery had still not arrived in North Carolina; nor would it. A few batteries, such as Kolb's and Goldthwaite's, made it as far as Augusta, where they surrendered to Federal authorities. Not one of the army's batteries was present when the remains of the Army of Tennessee surrendered at Durham on April 26.[60]

Perhaps it was the final symbol of the western long arm's nonrole. Although frequently plagued by variables beyond its control—the rugged terrain, poor ordnance, the lack of militia base—its true misfortune proved to be the controllable variables that were mishandled: effective organization and an understanding of the changing role of the artillery. Thus the western long arm, the "neglected branch of the army," as Melancthon Smith referred to it, passed from existence, to be remembered only by the fieldpieces that would one day dot the battlefield parks.

Appendix A
Organizational Tables

Shiloh (April 6–7, 1862) (*Note:* Some returns list the Vaiden (Miss.) Light Artillery and Watson's (La.) Flying Artillery. It can be documented, however, that the former remained in the Corinth garrison and the latter at Grand Junction, Tennessee, during the battle.

Army of the Mississippi (*Note:* Major Francis Shoup was the senior officer, but no army artillery chief was assigned.)

Polk's Corps, Capt. Smith P. Bankhead

Clark's Division
Russell's Brigade—Bankhead's Tenn. Battery, Capt. Smith P. Bankhead
Stewart's Brigade—Stanford's Miss. Battery, Capt. Thomas J. Stanford

Cheatham's Division
Johnson's Brigade—Polk's Tenn. Battery, Capt. Marshall T. Polk
Stephens's Brigade—Smith's Miss. Battery, Capt. Melancthon Smith

Bragg's Corps, Major James Hallonquist

Ruggles's Division
Anderson's Brigade—La. Washington Artillery (Fifth Co.), Capt. Irving W. Hodgson
Pond's Brigade—Ketchum's Ala. Battery, Capt. William Ketchum

Withers's Division
Gladden's Brigade—Robertson's Fla. Battery, Capt. Felix Robertson
Chalmers's Brigade—Gage's Ala. Battery, Capt. Charles P. Gage
Jackson's Brigade—Augusta Washington Artillery, Capt. I. P. Girardey

Hardee's Corps, Major Francis Shoup

Hindman's Brigade—Warren (Miss.) Light Artillery, Capt. Charles Swett
Pillow (Tenn.) Flying Art'y, Capt. William Miller (Note: Although listed on returns, there is no evidence that this battery participated in the battle.)
Cleburne's Brigade—Shoup's Ark. Battalion, Major Francis Shoup
Trigg's Ark. Battery, Capt. John T. Trigg
Helena (Ark.) Light Art'y, Capt. J. H. Calvert
Hubbard's (Ark.) Battery, Capt. George T. Hubbard
Wood's Brigade—Jefferson (Miss.) Flying Art'y, Capt. William Harper

Reserve Corps

Trabue's Brigade—Byrne's Ky. Battery, Capt. Edward Byrne Cobb's Ky.
Brigade, Capt. Robert Cobb
Bowen's Brigade—Pettus (Miss.) Flying Art'y, Capt. Alfred Hudson
Statham's Brigade—Rutledge's (Tenn.) Battery, Capt. Arthur M. Rutledge

Unattached

McClung's (Tenn.) Battery, Capt. Hugh L. W. McClung Roberts's Ark.
Battery, Capt. Franklin Roberts

Stones River (Dec. 31, 1862–Jan. 2, 1863)

Army of Tennessee
Lt. Col. James H. Hallonquist

Polk's Corps, Capt. Felix Robertson (acting chief)

Cheatham's Division, Maj. Melancthon Smith
Donelson's Brigade—Carnes's Tenn. Battery, Lt. L. G. Marshall
Stewart's Brigade—Stanford's Miss. Battery, Capt. Thomas J. Stanford
Maney's Brigade—Smith's Miss. Battery, Lt. William B. Turner
Smith's Brigade—Scott's Tenn. Battery, Capt. W. L. Scott

Withers's Division, Capt. J. R. B. Burtwell (acting chief)
Deas's Brigade—Robertson's Fla. Battery, Capt. Felix H. Robertson
Chalmers's Brigade—Garrity's Ala. Battery, Capt. James Garrity
Walthall's Brigade—Barret's Mo. Battery, Capt. W. O. Barret
Anderson's Brigade—Waters's Ala. Battery, Capt. D. D. Waters

Hardee's Corps, Capt. Llewellyn Hoxton (acting chief)

Breckinridge's Division, Maj. Rice E. Graves
Adams's Brigade—La. Washington Artillery (Fifth Co.), Lt. W. C. D. Vaught
Palmer's Brigade—Moses's Ga. Battery (G, Fourteenth Ga. Light Art'y Battalion), Lt. R. W. Anderson
Hanson's Brigade—Cobb's Ky. Battery, Capt. Robert Cobb
Jackson's Brigade—Pritchard's Ga. Battery (Section)
Lumsden's Ala. Battery, Lt. H. H. Cribbs

Cleburne's Division, Capt. Thomas R. Hotchkiss (acting chief)
Polk's Brigade—Helena Light Artillery, Lt. Thomas J. Key
Liddell's Brigade—Warren Light Artillery, Lt. Harvey Shannan
Johnson's Brigade—Jefferson Flying Artillery, Capt. Putnam Darden
Wood's Brigade—Semple's Ala. Battery, Capt. Henry Semple

McCown's Division, Maj. George H. Mathes
Ector's Brigade—Douglas's Tex. Battery, Capt. James P. Douglas
Rain's Brigade—Eufaula Light Artillery, Lt. W. A. McDuffie
McNair's Brigade—First Arkansas Battery, Capt. J. T. Humphreys

Wheeler's Cavalry

Wheeler's Brigade—Wiggins's Ark. Battery, Capt. J. H. Wiggins
Wharton's Brigade—White's Tenn. Battery, Capt. B. F. White

Unattached

Bryne's Ky. Battery, Capt. Edward Byrne

Chattanooga (July 31, 1863)

Army of Tennessee

Polk's Corps

Cheatham's Division
Maney's Brigade—Smith's Miss. Battery, Lt. William B. Turner
Smith's Brigade—Scott's Tenn. Battery, Lt. A. T. Watson
Wright's Brigade—Carnes's Tenn. Battery, Capt. W. W. Carnes
Strahl's Brigade—Stanford's Miss. Battery, Capt. Thomas J. Stanford

Withers's Division
Anderson's Brigade—Robertson's Fla. Battery, Lt. S. H. Dent
Deas's Brigade—Garrity's Ala. Battery, Capt. James Garrity
Walthall's Brigade—Fowler's Ala. Battery, Capt. W. H. Fowler
Manigault's Brigade—Waters's Ala. Battery, Lt. W. P. Hamilton

Hill's Corps

Cleburne's Division
Wood's Brigade—Semple's Ala. Battery, Capt. Henry C. Semple
Churchill's Brigade—Douglas's Tex. Battery, Capt. J. P. Douglas
Liddell's Brigade—Swett's Miss. Battery, Capt. Charles Swett
Polk's Brigade—Calvert's Ark. Battery, Lt. Thomas J. Key

Stewart's Division
Johnson's Brigade—Jefferson (Miss.) Artillery, Capt. Putnam Darden
Brown's Brigade—Dawson's Ga. Battery, Lt. R. W. Anderson
Bate's Brigade—Eufaula Light Artillery, Lt. W. J. McKenzie
Clayton's Brigade—Humphrey's Ark. Battery, Capt. J. T. Humphreys
Jackson's Brigade—Pritchard's Ga. Battery, Capt. E. E. Pritchard
Scogin's Ga. Battery, Capt. John Scogin

Wheeler's Cavalry

Wharton's Division—White's Tenn. Battery, Capt. B. F. White Jr.
Martin's Division—Wiggins's Tenn. Battery, Lt. A. A. Blake
Morgan's Division—Byrne's Ky. Battery
Roddey's Division (Northern Alabama)—Ferrell's Ga. Battery, Capt. C. B. Ferrell

Chickamauga (September 19–20, 1863)

Army of Tennessee
Lt. Col. James H. Hallonquist

Polk's Wing

Cheatham's Division—Maj. Melancthon Smith
Carnes's Tenn. Battery, Capt. William W. Carnes

Scogin's Ga. Battery, Capt. John Scogin
Scott's Tenn. Battery, Lt. J. H. Marsh
Smith's Miss. Battery, Lt. William B. Turner
Stanford's Miss. Battery, Capt. Thomas J. Stanford

Hill's Corps, Lt. Col. James Bondurant
Cleburne's Division, Maj. Thomas Hotchkiss
Helena Light Artillery, Lt. Thomas J. Key
Douglas Tex. Battery, Capt. James P. Douglas
Semple's Ala. Battery, Lt. Richard Goldthwaite
Breckinridge's Division, Maj. Rice E. Graves
Cobb's Ky. Battery, Capt. Robert Cobb
Mebane's Tenn. Battery, Capt. John W. Mebane
La. Washington Art'y, Capt. Cuthbert H. Slocomb

Walker's Corps
Gist's Division
Ferguson's S.C. Battery, Lt. René T. Beauregard (at home)
Martin's Ga. Battery, Capt. Evan P. Howell
Liddell's Division
Fowler's Ala. Battery, Capt. W. H. Fowler
Warren Light Artillery, Lt. Harvey Shannon

Longstreet's Wing

Buckner's Corps, Maj. Thomas Porter
Stewart's Division, Maj. John W. Eldridge
E, Ninth Ga. Art'y Battalion, Lt. W. S. Everett
First Arkansas Battery, Capt. John T. Humphreys
G, Fourteenth Ga. Art'y Battalion, Lt. R. W. Anderson
Eufaula Light Artillery, Capt. McDonald Oliver
Preston's Division, Maj. A. Leydon
Nottoway Light Artillery, Capt. William C. Jeffress
D, Ninth Ga. Art'y Battalion, Capt. T. M. Peeples
C, Ninth Ga. Art'y Battalion, Capt. W. A. Wolihin
Hindman's Division, Maj. Alfred R. Courtney
Garrity's Ala. Battery, Capt. James Garrity
Dent's Confederate Battery, Capt. S. H. Dent

Waters's Ala. Battery, Lt. Charles W. Watkins
Reserve Artillery, Maj. Samuel C. Williams
Baxter's Tenn. Battery, Capt. Edmund D. Baxter
Jefferson Flying Artillery, Capt. Putnam Darden
Barbour Artillery, Capt. Robert F. Kolb
Marion Light Artillery, Lt. Robert P. McCants

Hood's Corps
Johnson's Division
Bledsoe's Mo. Battery, Lt. R. L. Wood
C, Palmetto Artillery, Capt. James F. Culpeper
Hood's Corps Artillery, Col. E. P. Alexander(en route)

Reserve Artillery, Maj. Felix H. Robertson

Bledsoe's Mo. Battery, Capt. W. Overton Barret
Havis's Ga. Battery, Capt. Minor Havis
Lumsden's Ala. Battery, Capt. Charles L. Lumsden
Massenburg's Ga. Battery, Capt. Thomas L. Massenburg

Horse Artillery

Wheeler's Cavalry
Wharton's Division
White's Tenn. Battery, Capt. B. F. White
Martin's Division
Wiggins's Ark. Battery, Lt. J. P. Bryant

Forrest's Cavalry
Armstrong's Division
Huggins's Tenn. Battery, Capt. A. L. Huggins
Morton's Tenn. Battery, Capt. John W. Morton
Pegram's Division
Huwald's Tenn. Battery, Capt. Gustave A. Huwald
La. Battery (section), Lt. Winslow Robinson

Chattanooga (November 19, 1863)

Army of Tennessee
Lt. Col. James H. Hallonquist

Hardee's Corps

Cheatham's Division, Maj. Melancthon Smith
Fowler's Ala. Battery, Capt. William H. Fowler
McCants's Fla. Battery, Capt. Robert P. McCants
Scogin's Ga. Battery, Capt. John Scogin
Smith's Miss. Battery, Lt. William B. Turner

Hindman's Division, Maj. Alfred R. Courtney
Dent's Confederate Battery, Capt. S. H. Dent
Garrity's Ala. Battery, Capt. James Garrity
Scott's Tenn. Battery, Lt. John Doscher
Waters's Ala. Battery, Lt. William B. Hamilton

Walker's Division, Maj. Robert Martin
Bledsoe's Mo. Battery, Capt. Hiram M. Bledsoe
Ferguson's S.C. Battery, Capt. T. B. Ferguson
Howell's Ga. Battery, Capt. Evan P. Howell

Breckinridge's Corps

Cleburne's Division, Maj. Thomas R. Hotchkiss
Calvert's Ark. Battery, Lt. Thomas J. Key
Douglas's Tex. Battery, Capt. James P. Douglas
Semple's Ala. Battery, Lt. Richard W. Goldthwaite
Swett's Miss. Battery, Lt. Harvey Shannon

Stewart's Division, Capt. Henry C. Semple
Dawson's Ga. Battery, Lt. Ruel W. Anderson
Humpreys's Ark. Battery, Lt. John W. Rivers
Eufaula Artillery, Captain McDonald Oliver
Stanford's Miss. Battery, Capt. Thomas J. Stanford

Breckinridge's Division, Capt. C. H. Slocomb
Cobb's Ky. Battery, Lt. Frank P. Gracey

Mebane's Tenn. Battery, Capt. John W. Mebane
Washington Artillery, Lt. W. C. D. Vaught

Stevenson's Division, Capt. Robert Cobb
Carnes's Tenn. Battery, Capt. William W. Carnes
Van den Corput's Ga. Battery, Capt. Max Van den Corput
Rowan's Ga. Battery, Capt. John B. Rowan

Reserve Artillery, Maj. Felix H. Robertson

Barret's Mo. Battery, Capt. Overton W. Barret
Havis's Ga. Battery, Lt. James R. Duncan
Lumsden's Ala. Battery, Lt. Harvey Cribbs
Massenburg's Ga. Battery, Capt. Thomas L. Massenburg

Horse Artillery

Huggins's Tenn. Battery, Capt. A. L. Huggins
Huwald's Tenn. Battery, Capt. Gustave A. Huwald
White's Tenn. Battery, Capt. B. F. White
Wiggins's Ark. Battery, Capt. J. H. Wiggins

Dalton, Georgia (April 30, 1864)

Army of Tennessee
Brig. Gen. Francis A. Shoup

Hardee's Corps, Col. Melancthon Smith

Hoxton's Battalion, Col. Melancthon Smith
Phelan's Ala. Battery, Capt. John Phelan
Marion Light Artillery, Lt. Thomas J. Perry
Turner's Miss. Battery, Capt. William B. Turner

Hotchkiss's Battalion, Maj. Thomas R. Hotchkiss
Helena Light Artillery, Capt. Thomas J. Key
Semple's Ala. Battery, Lt. Richard W. Goldthwaite
Warren Light Artillery, Lt. Harvey Shannon

Martin's Battalion, Maj. Robert Martin
Bledsoe's Mo. Battery, Lt. C. W. Higgins

Ferguson's S.C. Battery, Lt. René Beauregard
Howell's Ga. Battery, Lt. W. G. Robson

Cobb's Battalion, Capt. Robert Cobb
Cobb's Ky. Battery, Lt. R. W. Matthews
Johnson Light Artillery, Capt. J. W. Mebane
Washington Artillery (Fifth Co.), Lt. W. C. D. Vaught

Hood's Corps, Col. Robert F. Beckham

Courtney's Battalion, Maj. Robert R. Courtney
Garrity's Ala. Battery, Capt. James Garrity
Confederate Battery, Capt. S. H. Dent
Douglas's Tex. Battery, Lt. J. H. Bingham

Eldridge's Battalion, Maj. John W. Eldridge
Eufaula Light Artillery, Capt. McDonald Oliver
Fenner's La. Battery, Capt. Charles E. Fenner
Stanford's Miss. Battery, Capt. Thomas J. Stanford

Johnston's Battalion, Maj. John W. Johnson
Cherokee Artillery, Capt. Max Van den Corput
Stephens's Light Artillery, Capt. John B. Rowan
Marshall's Tenn. Battery, Capt. Lucius G. Marshall

Artillery Reserve, Lt. Col. James H. Hallonquist

Palmer's Battalion, Maj. Joseph Palmer
Lumsden's Ala. Battery, Capt. Charles L. Lumsden
Anderson's Ga. Battery, Capt. Ruel W. Anderson
Havis's Ga. Battery, Capt. Minor W. Havis

Waddell's Battalion, Maj. James P. Waddell
Emery's Ala. Battery, Capt. W. D. Emery
Bellamy's Ala. Battery, Lt. F. A. O'Neal
Barret's Mo. Battery, Capt. W. Overton Barret

Williams's Battalion, Maj. Samuel C. Williams
Barbour Light Artillery, Capt. Robert F. Kolb
Jefferson Flying Artillery, Capt. Putnam Darden
Nottoway Light Artillery, Capt. William C. Jeffress

Horse Artillery, Lt. Col. Felix H. Robertson

Huwald's Tenn. Battery, Lt. D. B. Ramsey
White's Tenn. Battery, Capt. B. F. White
Wiggins's Ark. Battery, Lt. J. P. Bryant
Huggins's Tenn. Battery, Capt. A. L. Huggins
Ferrell's Ga. Battery (section), Lt. W. B. S. Davis

Atlanta (August 31, 1864)

Army of Tennessee
Col. Robert F. Beckham

Hardee's Corps, Col. Melancthon Smith

Hoxton's Battalion
Marion Light Artillery, Capt. Thomas J. Perry
Phelan's Ala. Battery, Lt. Nathaniel Venable
Turner's Miss. Battery, Capt. William B. Turner

Hotchkiss's Battalion
Bledsoe's Mo. Battery, Capt. Hiram M. Bledsoe
Ferguson's S.C. Battery, Lt. René T. Beauregard
Howell's Ga. Battery, Capt. Evan P. Howell

Cobb's Battalion
Gracey's Ky. Battery, Capt. Frank P. Gracey
Mebane's Tenn. Battery, Lt. J. W. Phillips
Washington Artillery (Fifth Co.), Capt. Cuthbert H. Slocomb

Palmer's Battalion
Lumsden's Ala. Battery, Capt. Charles L. Lumsden
Anderson's Ga. Battery, Capt. Ruel W. Anderson
Havis's Ga. Battery, Capt. Minor W. Havis

Lee's Corps, Lt. Col. James H. Hallonquist

Eldridge's Battalion
Eufaula Artillery, Capt. William J. McKenzie
Fenner's La. Battery, Capt. Charles E. Fenner
Stanford's Miss. Battery, Lt. James S. McCall

Courtney's Battalion
Dent's Confederate Battery, Capt. Staunton H. Dent
Douglas's Tex. Battery, Capt. James P. Douglas
Garrity's Ala. Battery, Lt. Phillip Bond

Johnston's Battalion, Capt. John B. Rowan
Cherokee Light Artillery, Lt. Meshack L. McWhorter
Stephens Light Artillery, Lt. William L. Ritter
Marshall's Tenn. Battery, Capt. Lucius G. Marshall

Williams's Battalion, Capt. Reuben F. Kolb
Barbour Light Artillery, Lt. Robert Cherry
Jefferson Light Artillery, Capt. Putnam Darden
Nottoway Light Artillery, Lt. Samuel B. Wingo

Stewart's Corps, Lt. Col. Samuel C. Williams

Myrick's Battalion
Cowan's Miss. Battery, Lt. George H. Tompkins
Pointe Coupee Artillery, Capt. Alcide Bouanchaud
Lookout Artillery, Capt. Robert L. Barry

Storrs's Battalion
Brookhaven Artillery, Capt. James H. Hoskins
Guibor's Mo. Battery, Capt. Henry Guibor
Ward's Ala. Battery, Lt. George W. Weaver

Preston's Battalion
Gid. Nelson Artillery, Lt. Charles W. Lovelace
Tarrent's Ala. Battery, Capt. Edward Tarrent
Yates's Miss. Battery, Lt. W. J. Shelton

Horse Artillery

Wheeler's Corps
Huwald's Tenn. Battery, Lt. D. Breck Ramsey
Ferrell's Ga. Battery, Lt. Nathan Davis
Huggins's Tenn. Battery, Capt. Almaria L. Huggins
White's Tenn. Battery, Capt. Benjamin F. White, Jr.
Wiggins's Ark. Battery, Lt. J. Wylie Calloway

Jackson's Division
Columbus Flying Artillery, Capt. Edward Croft
King's Mo. Battery, Capt. Houston King
Waties's S.C. Battery, Lt. R. B. Waddell

Nashville (December 15–16, 1864)

Army of Tennessee
Maj. Gen. Arnold Elzy

Lee's Corps, Lt. Col. Llewellyn Hoxton

(*Note:* Fenner's La. Battery and Marshall's Tenn. Battery, both of Lee's corps, were stationed at Murfreesboro and Columbia respectively, during the battle.)

Courtney's Battalion, Capt. James P. Douglas
Dent's Confederate Battery, Capt. Staunton H. Dent
Douglas's Tex. Battery, Lt. Ben Hardin
Garrity's Ala. Battery, Lt. Henry F. Campbell

Eldridge's Battalion, Capt. Charles E. Fenner
Eufaula Light Artillery, Capt. William J. McKenzie
Stanford's Miss. Battery, Lt. James S. McCall

Johnston's Battalion, Maj. John W. Johnston
Van den Corput's Ga. Battery, Lt. William S. Hoge
Stephens Light Artillery, Lt. William L. Ritter

Stewart's Corps, Lt. Col. Samuel C. Williams

(*Note:* Commanders not indicated on original return.)

Trueheart's Battalion
Lumsden's Ala. Battery
Selden's Ala. Battery
Tarrent's Ala. Battery

Myrick's Battalion
Bouanchaud's La. Battery

Cowan's Miss. Battery
Darden's Miss. Battery

Storrs's Battalion
Guibor's Mo. Battery
Hoskins's Miss. Battery
Kolb's Ala. Battery

Cheatham's Corps, Col. Melancthon Smith

(*Note:* Commanders not indicated on original return.)

Hoxton's Battalion
Perry's Fla. Battery
Phelan's Ala. Battery
Turner's Miss. Battery

Hotchkiss's Battalion
Bledsoe's Mo. Battery
Goldthwaite's Ala. Battery
Key's Ark. Battery

Cobb's Battalion
Ferguson's S.C. Battery
Mebane's Tenn. Battery
Slocomb's La. Battery

Appendix B

Battery Profiles

Battery Name	Organized	Place	Captains*
Alabama			
Alabama State Artillery	May '61	Mobile	William H. Ketchum, James Garrity
Barbour Light Artillery	April '62	Eufaula	Reuben F. Kolb
Bellamy's	Nov. '63	Columbus, Ga.	R. H. Bellamy
Emery's	Nov. '63	Columbus, Ga.	W. D. Emery
Eufaula Light Artillery	Feb. '62	Eufaula	McDonald Oliver
Fowler's	Jan. '62	Tuscaloosa	William H. Fowler, John Phelan
Gage's	May '61	Mobile	Charles P. Gage
Gid. Nelson Artillery	Spring '62	Uniontown	Joseph Selden, C. W. Lovelace
F, Second Alabama Light Artillery	Nov. '61	Tuscaloosa	Charles L. Lumsden
St. Mark's Artillery	March '62	Montgomery	Henry C. Semple, Richard W. Goldthwaite
Tarrent's	June '63	Pollard	Edward Tarrent
Waddell's	Feb. '62	Former Infantry	James F. Waddell
Ward's	Spring '63	Madison Co.	John J. Ward
Waters's	Dec. '61	Mobile	David D. Waters
Arkansas			
Clark County Light Artillery	Summer '61	Clark Co.	J. T. Trigg, Franklin Roberts, Jannedens H. Wiggins

First Arkansas Battery	Summer '61	Fort Smith	John T. Humphreys
Helena Light Artillery	May '61	Helena	J. H. Calvert, Thomas J. Key
Jackson County Light Artillery	May '61	Little Rock	G. T. Hubbard
Confederate			
Robertson's	Feb. '61	Pensacola	Felix H. Robertson, S. H. Dent
Florida			
Marion Light Artillery	June '61	Amelia Island	Thomas J. Perry, Robert P. McCants
Georgia			
Ninth Ga. Artillery Battalion			
Co. C	June '62		Andrew M. Wolihin
Co. D	Feb. '62	Gwinnett Co.	Tyler M. Peeples
Co. E	Feb. '62	Atlanta	Billington W. York, William S. Everett
Fourteenth Ga. Artillery Battalion			
Co. A	April '62	Houston Co.	Joseph Palmer, Minor W. Havis (Southern Rights Battery)
Co. B (Pulaski Artillery)	April '62	Pulaski Co.	Thomas H. Dawson, Ruel W. Anderson
Co. C	May '62		C. B. Ferrell
Co. D (Mountaineers)	April '62		E. R. King
Co. F	Oct. '62	Polk/Pulaski Cos.	James G. Gibson
Co. G (Stonewall Battery)	Oct. '62	Houston/Troup Cos.	Sidney A. Moses, Ruel W. Anderson
Cherokee Light Artillery	Aug. '61	Canton	Max Van den Corput
Columbus Light Artillery	Spring '62	Columbus	Edward Croft
Griffin Light Artillery	May '62	Griffin	John Scogins
Jackson Light Artillery	1860	Macon	George A. Dure, Thomas L. Massenburg

Sam Robinson Artillery	May '62	Washington Co.	Robert Martin, Evan P. Howell
Stephens Light Artillery	Sept. '61	Crawfordsville	John B. Rowan
Washington Artillery	Prewar Militia	Augusta	John R. B. Burtwell, Isadore P. Girardey, W. R. Pritchard
Kentucky			
Byrne's	Summer '61	Camp Boone, Tenn.	Edward P. Byrne
Cobb's	Summer '61		H. L. Lyon, Robert Cobb
Cumberland Light Artillery	Fall '61	Cumberland Co.	Henry F. Green
Grave's	Nov. '61		Rice Graves, J. Ingram
Louisiana			
Fenner's	May '62	Former Infantrymen	Charles E. Fenner
Orleans Guard Artillery	March '62	New Orleans	Henry Ducatel
Pointe Coupee, Company A	Nov. '61	Pointe Coupee Parish	Richard A. Stewart, Daniel Beltzhoover
Washington Artillery, Fifth Company	March '62	New Orleans	W. Irving Hodgson, Cuthbert H. Slocomb
Watson's Light Artillery	July '61	New Orleans	Daniel Beltzhoover
Mississippi			
First Miss. Light Artillery			
Co. G	Summer '62	Warren Co.	James J. Cowan
Co. L	Spring '62	Vaiden	Samuel Bains
Brookhaven Light Artillery	Early '62	Brookhaven	J. A. Hoskins
Jefferson Flying Artillery	April '61	Fayette	William L. Harper, Putnam Darden
Pettus Flying Artillery	Summer '61	Panola	Alfred Hudson
Smith's	July '61	3 Counties	Melancthon Smith, William B. Turner
Stanford's	May '61	Grenada	Thomas J. Stanford
Warren Light Artillery	May '61	Vicksburg	Charles Swett

Missouri			
Tenth Missouri Battery	April '62		Overton M. Barret
Bledsoe's Light Artillery	June '61		Hiram M. Bledsoe
Clark Light Artillery	Jan. '62		Houston King
Guibor's	April '62		Henry Guibor
South Carolina			
C, Palmetto	Sept. '61	Columbia	James F. Culpeper
Ferguson's	April '62	Charleston	T. B. Ferguson, René Beauregard
Tennessee			
A, First Tennessee Artillery	July '61	Nashville	Arthur M. Rutledge
G, Artillery Corps of Tenn.	Aug. '61	Camp Brown	Marshall T. Polk
Bankhead's	May '61	Memphis	Smith P. Bankhead, William L. Scott
Burns Light Artillery	July '61	Nashville	Thomas K. Porter, John W. Morton
Caswell Artillery	Fall '61	Knoxville	Hugh L. W. McClung
Harding Light Artillery, Co. A	May '61	Nashville	Edward D. Baxter, Samuel L. Freeman
Harding Light Artillery, Co. B	May '61	Nashville	H. Baker
Humphreys Light Artillery	Sept. '61	Humphreys Co.	Frank Maney
Huwald's	June '62	Knoxville	Gustave A. Huwald
Johnston Light Artillery	Oct. '61	Hardin Co.	John Wesley Eldridge, John W. Mebane
Lookout Artillery	May '62	Chattanooga	Robert L. Barry
Memphis Light Artillery	July '61	Memphis	Llewellyn Hoxton
Steuben Artillery	May '61	Memphis	William H. Jackson, William W. Carnes, Lucius G. Marshall
White's	Oct. '61		Benjamin F. White
Texas			
Dallas Light Artillery	Militia	Dallas	James P. Douglas

Virginia			
Giles Light Artillery	June '61	Giles Co.	David A. French
Goochland Light Artillery	May '61	Goochland Co.	John H. Guy
Nottoway Artillery	June '61	Nottoway Co.	William C. Jeffress

*While serving in Army of Tennessee

Appendix C

Prewar Military Backgrounds

Rank	Name	Background
Brig. Gen.	Francis A. Shoup	West Point graduate
Col.	Robert F. Beckham	West Point graduate
Col.	Melancthon Smith	West Point graduate
Lt. Col.	James Hallonquist	West Point graduate
Lt. Col.	Felix H. Robertson	West Point student*
Maj.	Rice Graves	West Point student*
Maj.	Llewellyn Hoxton	West Point graduate
Maj.	Thomas K. Porter	U.S. Navy
Maj.	George S. Storrs	Annapolis graduate
Maj.	Daniel Trueheart	VMI graduate
Maj.	James P. Waddell	Mexican War veteran
Maj.	Samuel C. Williams	West Point student*
Capt.	Smith P. Bankhead	Hampton (Va.) Military School
Capt.	Daniel Beltzhoover	West Point graduate
Capt.	William W. Carnes	Annapolis graduate
Capt.	James F. Culpeper	Citadel graduate
Capt.	Thomas Ferguson	Citadel graduate
Capt.	William H. Jackson	West Point graduate
Capt.	William C. Jeffress	VMI graduate
Capt.	Charles Lumsden	VMI graduate
Capt.	Hugh L. W. McClung	VMI graduate
Capt.	Thomas L. Massenburg	Hampton (Va.) Military School
Capt.	Arthur M. Rutledge	West Point graduate
Capt.	Charles Swett	West Point graduate

*Resigned at commencement of war and before graduation

Notes

Abbreviations

ADAH	Alabama Department of Archives and History
AGIR	Adjutant General Inspection Reports, National Archives
AHS	Arkansas Historical Society
ATOR	Army of Tennessee, Ordnance Records, National Archives
B & L	*Battles and Leaders of the Civil War*
CCNMP	Chickamauga-Chattanooga National Military Park
CV	*Confederate Veteran*
DU	Duke University
FC	Filson Club
GPL	Greenwood, Mississippi, Public Library
KNMP	Kennesaw National Military Park
LSU	Louisiana State University
MDAH	Mississippi Department of Archives and History
NARG	National Archives Record Group
NYHS	New York Historical Society
OR	*The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies*
SHC	Southern Historical Collection
SHSP	*Southern Historical Society Papers*
SNMP	Shiloh National Military Park
SOR	*Supplement to the Official Records of the Union and Confederate Armies*
TSLA	Tennessee State Library and Archives
TU	Tulane University
THQ	*Tennessee Historical Quarterly*
WRHS	Western Reserve Historical Society
VNMP	Vicksburg National Military Park

Chapter 1. Birth of the Western Long Arm

1. Thomas L. Connelly, *Army of the Heartland: The Army of Tennessee, 1861–1862* (Baton Rouge, 1967), 25; Robert H. White, ed., *Messages of the Governors of Tennessee, 1857–1869* (Nashville, 1959), 5:309; *Memphis Appeal,* May 11, 1861; Civil War Centennial Commission, *Tennesseans in the Civil War* (Nashville, 1964), 1:118; *The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies* (Washington, D.C., 1880–1901), series 4, 3:900–903, series 1, 52 (pt. 2): 90 (hereafter cited as *OR;* all references are in series 1 unless otherwise specified); Thomas A. Head, *Campaigns and Battles of the Sixteenth Regiment Tennessee Volunteers* (McMinnville, Tenn., 1961), 236.

2. Stanley F. Horn, ed., *Tennessee's War, 1861–1865* (Nashville, 1965), 19; Haynes to Pillow, June 12, 1861, Isham G. Harris Papers, Tennessee State Library and Archives (hereafter cited as TSLA); John B. Lindsley, ed., *Military Annals of Tennessee, Confederate* (Nashville, 1886), 790, 805–6; *OR,* 52 (pt. 2): 123, series 4, 1:417.

3. Military Board Record Book, vol. 63, series 6, Record Group 21, TSLA; *Memphis Appeal,* May 15, June 30, 1861; Leroy P. Graf, Ralph W. Haskins, and Paul H. Bergeron, eds., *The Papers of Andrew Johnson* (Knoxville: University of Tennessee Press, 1976), 4:128–29.

4. *Nashville Union and American,* July 19, 1861; *Memphis Appeal,* August 20, 1861.

5. *OR,* 52 (pt. 2): 123; Francis T. Miller, ed., *The Photographic History of the Civil War* (New York, 1911), 5:65; "Rutledge's Battery," *Confederate Veteran* (hereafter cited as *CV)* 36 (June 1928): 260.

6. Robert E. L. Krick, *Staff Officers in Gray: A Biographical Register of the Staff Officers in the Army of Northern Virginia* (Chapel Hill: University of North Carolina Press, 2003), 315; Civil War Centennial Commission, *Tennesseans in the Civil War,* 1:144, 149; Lindsley, *Military Annals,* 790; *Memphis Appeal,* March 18, 1862. That Polk's guns were made by Quinby and Robinson was confirmed by a reporter of the *Cincinnati Commercial* of April 15, 1862, who saw them after the battle of Shiloh. Bankhead perhaps graduated from the military school in Hampden, Virginia. He was not a Virginia Military Institute graduate.

7. *Memphis Appeal,* May 21, 1861; Broomfield L. Ridley, *Battles and Sketches of the Army of Tennessee* (Mexico, Mo., 1906), 473; "List of Officers of the Corps of Artillery of Tennessee," Benjamin F. Cheatham Papers, TSLA; Lindsley, *Military Annals,* 805, 855; Clement Evans, *Confederate Military History* (reprint, Dayton, 1975), 10:395, 596; B. L. Ridley, "Lieut.-Gen. A. P. Stewart," *CV* 3 (September 1895): 260.

8. "List of Artillery Officers," Confederate Collection, box 17, file 8, TSLA; Civil War Centennial Commission, *Tennesseans in the Civil War,* 1:118–19; *Nashville Union and American,* September 8, October 4, 1861; Governor's Address, October 7, 1861, in *Memphis Appeal,* October 11, 1861. For material on the Virginia state army see *OR,* 2:928 and series 4, 1:860.

9. *Memphis Avalanche,* February 17, 1862.

10. Nathaniel C. Hughes Jr., *The Pride of the Confederate Artillery: The Washington Artillery in the Army of Tennessee* (Baton Rouge: Louisiana State University Press, 1997), 8–9; Napier Bartlett, *Military Records of Louisiana* (Baton Rouge, 1964), 146–52; Miller, *Photographic History,* 1:95, 5:63; William C. Davis, ed., *The Images of War, 1861–1865* (New York, 1981), 1:150, 156, 303; William Miller Owen, *In Camp and Battle with the Washington Artillery of New Orleans* (reprint, Baton Rouge, 1999), 403–5; W. I. Hodgson, "History of the 5th Company Battalion Washington Artillery from April 1861 to June 6, 1862," Washington Artillery Papers, Tulane University (hereafter cited as TU).

11. W. A. Pickering, "The Washington Artillery of Augusta, Ga.," *CV* 17 (1909): 24–25; Allen D. Chandler, ed., *The Confederate Records of the State of Georgia* (Atlanta, 1910), 3:41, 43, 46; *Macon Daily Telegraph,* March 14, 17, 1860. The other western militia units were the Donaldsonville Artillery of Louisiana, which served in the trans-Mississippi, the Dallas Light Artillery, and the Jackson Light Artillery of Macon, organized in 1860, the last two linking up with the Army of Tennessee in 1863.

12. Semple's Alabama Battery, Muster Roll, Stanford's Mississippi Battery, Muster Roll, National Archives Record Group 109 (hereafter cited as NARG 109).

13. *Memphis Avalanche,* August 12, 1861; *New Orleans Daily Crescent,* February 26, 1862; "Occupations of Members of the Fifth Company," Washington Artillery Papers, TU; Hughes, *Pride of the Confederate Artillery,* 10–11.

14. Nathaniel C. Hughes Jr., *The Battle of Belmont: Grant Strikes South* (Chapel Hill, 1991), 69–70; Dunbar Rowland, *Official and Statistical Register of Mississippi* (Nashville, 1908), 879–80; *New Orleans Picayune,* November 9, 1861; *Biographical and Historical Memoirs of Mississippi* (Chicago, 1891), 992–96.

15. William W. Carnes, memoirs (William Carnes II private collection), 4, 6, 7, 17.

16. Civil War Centennial Commission, *Tennesseans in the Civil War,* 1:120, 123, 140, 148; Willis Brewer, *Alabama: Her History, Resources, War Record, and Public Men from 1540–1872* (Montgomery, 1872), 696, 698; Pickering, "Washington Artillery of Augusta, Ga.," 24.

17. James S. Silver, ed., *Mississippi in the Confederacy—Seen in Retrospect* (Baton Rouge, 1961), 104–5.

18. Thomas B. Hammett Memoirs, Jefferson Flying Artillery File, Chickamauga-Chattanooga National Military Park (hereafter cited as CCNMP).

19. "Swett's Battery—Warren Light Artillery," Swett's Battery File, CCNMP; George A. Grammer Diary, August 20, 1861, Mississippi Department of Archives and History (hereafter cited as MDAH); John E. Magee Diary, November 17, 1861, Duke University (hereafter cited as DU); "Rutledge's Battery," 260.

20. David A. Welker, ed., *A Keystone Rebel: The Civil War Diary of Joseph Garey, Hudson's Battery Mississippi Volunteers* (Gettysburg, 1996), 17; Grammer Diary, Au-

gust 30, 1861, Vicksburg National Military Park (hereafter cited as VNMP); Magee Diary, November 8, December 1, 1861, DU; Stanford's Mississippi Battery, Military Service File, NARG 109.

21. Nathaniel C. Hughes Jr., *The Civil War Memoir of Philip Daingerfield Stephenson, D.D.* (Conway, Ark., 1995), 165.

22. Welker, *Keystone Rebel,* 21; John A. Grammer Diary, November 1, 10, 21, 1861, VNMP.

23. Albert B. Fall, "Civil War Letters of Albert Boult Fall, Gunner for the Confederacy," *Register of the Kentucky Historical Society* 59 (April 1961): 153, 154, 158.

24. Welker, *Keystone Rebel,* 35.

25. George W. Cullom, *Biographical Register of the Officers and Graduates of the U.S. Military Academy from 1802 to 1867* (New York, 1879), 2:301–2; "Swett's Battery—Warren Light Artillery," Swett's Battery File, CCNMP; Swett's Memoirs, 4, Shiloh National Military Park (hereafter cited as SNMP); Richard M. McMurry, *Virginia Military Institute Alumni in the Civil War* (Lynchburg, 1990), 163; Evans, *Confederate Military History,* 5:843, 906, 8:551, 796, 830, 9:336, 10:371; Witt A. Cate, ed., *Two Soldiers: The Campaign Diaries of Thomas J. Key, C.S.A. and Robert J. Campbell, U.S.A.* (Chapel Hill, 1938), 4; "Capt. Thomas L. Massenburg," *CV* 12 (December 1908): 630; "Robert Cobb, Maj. Gen. UCV," *CV* 4 (April 1894): 103; "Maj. John William Johnston," *CV* 19 (March 1911): 117; "Major James P. Douglas," *CV* 10 (July 1902): 322; "Capt. Minor W. Havis," in Havis Battery File, CCNMP; Carnes, memoirs, 10.

26. W. H. Brown, "History of Stanford's Mississippi Battery," Greenwood, Mississippi, Public Library (hereafter cited as GPL); Richard L. Pugh to wife, April 11, 1862, Richard L. Pugh Letters, Louisiana State University (hereafter cited as LSU).

27. A. James Fuller, *Chaplain to the Confederacy: Basil Manly and Baptist Life in the Old South* (Baton Rouge, 2000), 298; Hughes, *Battle of Belmont,* 69–71.

28. Welker, *Keystone Rebel,* 54–55.

29. *OR,* 52 (pt. 2): 127, series 4, 1:63; Jennings Wise, *The Long Arm of Lee: The History of the Artillery of the Army of Northern Virginia* (reprint, New York, 1959), 38n; Chandler, *Confederate Records of the State of Georgia,* 3:41.

30. "Compilation of Arkansas Batteries," Arkansas Historical Society (hereafter cited as AHS); Ephraim McD. Anderson, *First Missouri Confederate Brigade* (reprint, Dayton, 1972), 47; Joseph A. Wilson, "Bledsoe of Missouri," *CV* 7 (October 1899): 462; Cate, *Two Soldiers,* 101; *Memphis Appeal,* April 21 and 22, 1861; *Nashville Union and American,* April 25, 1861; *OR,* 52 (pt. 2): 100.

31. *OR,* 4:385–87.

32. William Preston Johnston, *The Life of Albert Sidney Johnston, Embracing His Services in the Armies of the United States, the Republic of Texas, and the Confederate States* (New York, 1879), 332; Noble Brothers and Company, "Papers relating to Citizens or Business Firms," NARG 109 (hereafter cited as "Citizens File").

33. *Memphis Appeal,* May 31, October 1, 1861; *Memphis Avalanche,* May 31, 1861; Quinby and Robinson, "Citizens File"; *Memphis Avalanche,* May 31, Septem-

ber 21, 1861; William G. Stevenson, *Thirteen Months in the Rebel Army* (New York, 1959), 61; T. M. Brennan and Company, "Citizens File."

34. *New Orleans Times*, December 30, 1865; Leeds and Company, John Clarke and Company, "Citizens File"; "List of Guns Furnished by Leeds and Company," April 29, 1863, Letters Sent, Ordnance Officer, Army of Tennessee, chap. 4, vol. 141, NARG 109.

35. *Memphis Appeal*, January 24, 1862; Noble Brothers and Company, Reading Brothers and Company, "Citizens File."

36. Warren Ripley, *Artillery and Ammunition of the Civil War* (New York, 1970), 15, 22, 23, 366, 367; Grady McWhiney and Perry D. Jamieson, *Attack and Die: Civil War Military Tactics and the Southern Heritage* (Tuscaloosa, Ala., 1982), 60–69; Jac Weller, "The Field Artillery of the Civil War," *Military Collector and Historian* 5 (June 1953): 33–34.

37. *OR*, 3:724, 4:152; James C. Hazlett, Edwin Olmstead, and M. Hume Parks, *Field Artillery Weapons of the Civil War* (Newark, 1983), 110–16. A recent examination of a surviving Noble Brothers fieldpiece revealed that imprecise machinery had caused the bore to be off one inch, which would cause the gun to shoot to the right of the true line of metal. Donald F. Long, "Ashe Ordnance Works Restores Original Noble Brothers Cannon," *Muzzleloading Artilleryman* (Spring 1982): 38.

38. Bell I. Wiley, *The Life of Johnny Reb: The Common Soldier in the Confederacy* (New York, 1943), 299; Stevenson, *Thirteen Months in the Rebel Army*, 61; *Charleston Mercury*, April 2, 1862.

Chapter 2. "The Battery Was the Common Target"

1. *OR*, 4:425; Civil War Centennial Commission, *Tennesseans in the Civil War*, 1:136; William C. Davis, *The Orphan Brigade: The Kentucky Confederates Who Couldn't Go Home* (New York, 1980), 26, 27; *Memphis Appeal*, September 17, 1861.

2. *OR*, 4:472, 484; Inventory of Buckner's Artillery, November 11, 1861, Robert Cobb, Military Service File, NARG 109; Davis, *Orphan Brigade*, 23, 38; Joseph H. Crute Jr., *Units of the Confederate States Army* (Midlothian, Va., 1987), 62, 64; Rowland, *Mississippi Statistical Register*, 866; Thomas L. Riddell, "Movements of the Goochland Light Artillery," *Southern Historical Society Papers* (hereafter cited as *SHSP*), 24 (1896): 316.

3. *OR*, 4:438, 526; 7:750–75; Eldridge to Mackall, November 13, 1861, Letters and Telegrams Sent, Ordnance Officer, Nashville and Atlanta, December 1861–April 1862, chap. 4, vol. 8, NARG 109.

4. Patricia L. Faust, ed., *Encyclopedia of the Civil War* (New York, 1986), 685–86; Shoup, "How We Went to Shiloh," 138; Grammer Diary, August 30, 1861, MDAH.

5. *OR*, 7:852–54.

6. E. P. Alexander, "Confederate Artillery Service," *SHSP* 11 (1883): 99; Maury Klein, *Edward Porter Alexander* (Athens, Ga., 1971), 57–58.

7. Johnston, *Johnston*, 368, 371–75; Hughes, *Belmont*, 66–67; William M. Polk,

"General Polk at the Battle of Belmont," *Battles and Leaders of the Civil War* (hereafter cited as *B & L*), 1:354; Ed Goelet to mother and sister, November 8, 1861, in Goelet-Buncombe Papers, Southern Historical Collection, University of North Carolina (hereafter cited as SHC); Stevenson, *Thirteen Months*, 61; *OR*, 3:352, 359–60; *Memphis Appeal*, November 9, 1861; Carnes, memoirs, 7.

8. Kenneth A. Hafendorfer, *Mill Springs: Campaign and Battle of Mill Springs, Kentucky* (Louisville, 2001), 173, 175, 228–29, 444, 468, 470; Civil War Centennial Commission, *Tennesseans in the Civil War*, 1:139; Connelly, *Army of the Heartland*, 97–98; Johnston, *Johnston*, 402–9; R. M. Kelly, "Holding Kentucky for the Union," *B & L* 1:390; *OR*, 7:105, 108, 110; *New York Tribune*, February 7, 1862. The *Tribune* reporter noted that the captured carriages and caissons were of "superior make." For accounts of the battle at Mill Springs from two of Rutledge's cannoneers, see *Memphis Avalanche*, January 30, 1862, and *Nashville Union and American*, January 30, 1862.

9. *OR*, 7:849.

10. Johnston, *Johnston*, 442, 443, 450, 479, 482.

11. Davis, *Orphan Brigade*, 38–39; Lindsley, *Military Annals*, 468; "Forrest's Chief of Artillery—Morton," *CV* 8 (1900): 171; Connelly, *Army of the Heartland*, 120.

12. *OR*, 7:360; Lew Wallace, "The Capture of Fort Donelson," *B & L*, 1:412. Maney attended, but did not graduate, West Point. He served three weeks with the Garibaldi battery in Italy. "List of Artillery Officers," Confederate Collection, box 17, file 8, TSLA.

13. H. L. Bedford, "Fight between the Batteries and Gunboats at Fort Donelson," *SHSP* 13 (1885): 170–72; R. R. Ross, "River Batteries at Fort Donelson," *CV* 4 (October 1896): 394–96; Connelly, *Army of the Heartland*, 120.

14. Riddell, "Movements of the Goochland Light Artillery," 319.

15. John H. Guy Journal, Virginia Historical Society, Richmond, Va.

16. Davis, *Orphan Brigade*, 68; Lindsley, *Military Annals*, 859.

17. Grammer Diary, February 17, 1862, VNMP; Larry J. Daniel and Lyn N. Bock, *Island No. 10: Struggle for the Mississippi Valley* (Tuscaloosa, Ala., 1996), 29–30; *OR*, 7:425; Stevenson, *Thirteen Months*, 91.

18. William Polk to sister, March 29, 1862, Leonidas Polk Papers, University of the South, Sewanee, Tennessee; *New Orleans Delta*, March 18, 20, 1862; Daniel and Bock, *Island No. 10*, 144–45.

Chapter 3. Missed Opportunities

1. *OR*, 4:919, 10 (pt. 1): 414.

2. Grammer Diary, March 12, 22, 1862, MDAH; *OR*, 3:904–5, 10 (pt. 2): 327; "Morning Report of Cobb's Battery, March 17, 1862," Robert Cobb, Military Service File, National Archives. Baker's and Monsarrat's Tennessee batteries of Hardee's corps remained at Iuka, Mississippi.

3. Pickering, "Washington Artillery of Augusta, Ga.," 24–25; James H. Colgin, ed., "The Life Story of Brig. Gen. Felix Robertson," *Texana* 8 (Spring 1979): 154–55; Brewer, *Alabama*, 696, 698; *OR*, 10 (pt. 2): 307; George Little and James R. Maxwell, *A History of Lumsden's Battery* (Tuscaloosa, Ala., 1905), 7.

4. *OR*, 6:832, 847; Bartlett, *Military Records of Louisiana*, pt. 5, 152; B. H. Green to father, March 1862, B. H. Green Letters, in Wiley Collection, Emory University. Watson's Louisiana Battery remained at Grand Junction and did not participate in the upcoming battle. Edward C. Haydel to sister, April 6, 1862, Edward C. Haydel Letters, LSU.

5. Green to parents, April 1, 1862, Green Letters, Emory University.

6. *OR*, 10 (pt. 1): 398; Edwin C. Bearss, "Shiloh Artillery Study," Project No. 17, SNMP.

7. Lindsley, *Military Annals*, 810; *OR*, 10 (pt. 1): 398; Jones Diary, March 30, 1862, GPL.

8. Shoup, "How We Went to Shiloh," 137; *OR*, 10 (pt. 1): 413.

9. "Report of Ordnance and Ordnance Stores on Hand," Felix Robertson Military Service File, National Archives; *OR*, 10 (pt. 1): 388.

10. "The Battle of Shiloh—Report of L. D. Sandridge, Inspector General of the Louisiana Division," *SHSP* 35 (1907): 211; Johnston, *Johnston*, 555–56.

11. *OR*, 10 (pt. 1): 394, 10 (pt. 2): 388; Rowland, *Mississippi Statistical Register*, 852; Lindsley, *Military Annals*, 810. A detachment of the Vaiden Light Artillery served a section of Stanford's battery during the battle.

12. Johnston, *Johnston*, 559–60; Ed Porter Thompson, *History of the First Kentucky Brigade* (Cincinnati, 1868), 87.

13. Jones Diary, April 6, 1862, GPL; Alfred Roman, *The Military Operations of General Beauregard in the War between the States, 1861–1865* (New York, 1884), 1:285; *OR*, 10 (pt. 1): 574, 609; Grammer Diary, April 6, 1862, MDAH; Charles Swett Memoirs, SNMP.

14. *Mobile Advertiser and Register*, April 29, 1862; *OR*, 10 (pt. 1): 537; L. D. G. to parents, April 8, 1862, Gage's Alabama Battery File, Alabama Department of Archives and History (hereafter cited as ADAH).

15. Roman, *Beauregard*, 1:285; *OR*, 10 (pt. 1): 574, 609; Grammer Diary, April 6, 1862, MDAH.

16. *OR*, 10 (pt. 1): 471, 513; Wiley Sword, *Shiloh: Bloody April* (New York, 1974), 206; *Chicago Times*, April 16, 1862. The site of this first concentration is marked at the Shiloh National Military Park with several plaques.

17. Felix Robertson to Reed, August 1, 1909, Thirteenth Ohio Battery File, SNMP; John M. Powers, "That Terrible First Day," *Military History* (October 1984), 40; Roman, *Beauregard*, 1:291.

18. *OR*, 10 (pt. 1): 414, 445, 447; "List of Officers of the Corps of Artillery of Tennessee," Benjamin F. Cheatham Papers, TSLA; Civil War Centennial Commission, *Tennesseans in the Civil War*, 1:144; William S. Dillon Diary, April 6, 1862, Uni-

versity of Mississippi; Alexander Walker, "Narrative of the Battle of Shiloh," in *Diary of the War for Separation* (Vicksburg, 1905), 140.

19. *OR*, 10 (pt. 1): 549, 565.

20. A.D. Kirwan, ed., *Johnny Green of the Orphan Brigade* (Lexington, Ky., 1956), 26; *OR*, 10 (pt. 1): 616–17, 32 (pt. 3): 703; "Cobb's Battery Not Captured at Shiloh," *CV* 12 (February 1905): 68. Cobb was forced to abandon two guns and all six caissons.

21. *OR*, 10 (pt. 1): 513; Pugh to May, April 8, 1862, Richard L. Pugh Letters, LSU.

22. Magee Diary, April 6, 1862, DU; Jones Diary, April 6, 1862, GPL; *OR*, 10 (pt. 1): 610.

23. *OR*, 10 (pt. 1): 438, 479; Ed Goelet to mother and sister, March [May?] 10, 1862, in Goelet-Buncombe Papers, SHC; Henry George, *History of 3rd, 7th, 8th, and 12th Kentucky, C.S.A.* (Lyndon, Ky., 1911), 29.

24. Grady McWhiney, *Braxton Bragg and Confederate Defeat* (Tuscaloosa, Ala., 1969), 238–40; "Byrne's Battery," John Joyce Jr. Papers, Filson Club, Louisville, Kentucky (hereafter cited as FC).

25. *OR*, 10 (pt. 1): 472.

26. Ibid., 475.

27. Ibid., 479; Shoup, "How We Went to Shiloh," 139.

28. *OR*, 10 (pt. 1): 477. The number of guns participating in Ruggles's barrage had traditionally been placed at sixty-two. This is arrived at by taking his list of twelve batteries, one of which (Robertson's) had four guns and two of which (Ketchum's and Hubbard's) had only a two-gun section engaged and assuming that the other companies had six guns each. Ruggles's memory lapsed, however, in reporting that a "Captain Trabue's battery" had been engaged. Actually, Byrne's battery belonged to Colonel Robert Trabue's brigade. Edward O. Cunningham ("Shiloh and the Western Campaign of 1862," Ph.D. dissertation, Louisiana State University, 1966, 397–98) theorizes that this was perhaps a reference to Cobb's battery (also of Trabue's brigade), which wandered into line next to Byrne. Lieutenant Thrall of Hubbard's battery was certain, however, that Byrne was the last in line. Also, Trigg's and Roberts's companies were probably four-gun units, and Byrne's battery at the time had seven guns, having captured an extra gun in Kentucky. Bearss, "Shiloh Artillery Study," SNMP.

29. S. D. Dent to wife, April 9, 1862, Shiloh-Corinth Collection, ADAH; James G. Terry, ed., "Record of the Alabama State Artillery," *Alabama Historical Quarterly* 20 (1958): 316–17; Swett Memoirs, SNMP.

30. *OR*, 10 (pt. 1): 478; James L. McDonough, *Shiloh: In Hell before Night* (Knoxville, 1977), 164; Shoup, "How We Went to Shiloh," 139.

31. *OR*, 10 (pt. 1): 472–79; Shoup, "How We Went to Shiloh," 139; *New Orleans Picayune*, April 10, 1862; Swett Memoirs, SNMP.

32. D. W. Reed, *The Battle of Shiloh and the Organizations Engaged* (Washing-

ton, D.C., 1902), 87; *OR*, 10 (pt. 1): 616; Shoup, "How We Went to Shiloh," 139; Walker, "Narrative of the Battle of Shiloh," 144–46. Walker of the *New Orleans Delta* claimed thirty-six guns were involved: Bankhead's, Polk's, Smith's, Jefferson Artillery, Washington Artillery, Robertson's, and Watson's. An article in the *New Orleans Picayune* of April 15, 1862, claimed that Watson's six guns and three of Hudson's engaged Grant's last line.

33. Roman, *Beauregard*, 1:299; *OR*, 10 (pt. 1): 550–51, 555; Reed, *Shiloh*, 74–75; *Mobile Advertiser and Register*, April 11, 1862.

34. Magee Diary, April 6, 1862, DU.

35. *OR*, 10 (pt. 1): 170, 193, 518, 528; Richard B. Harwell, ed., *The Journal of a Confederate Nurse by Kate Jackson* (Baton Rouge, 1959), 10. Captain Ketchum was struck by a shell fragment but only slightly wounded. J. P. Barnes, "Incidents of the Great Battle," April 11, 1862, Ketchum's Alabama Battery File, ADAH.

36. *OR*, 10 (pt. 1): 274, 565, 583; National Park Service, plaque 432.

37. *OR*, 10 (pt. 1): 514–15; Pugh to May, April 10, 1862, Richard L. Pugh Letters, LSU; J. A. Chalaron, "Battle Echoes from Shiloh," *SHSP* 21 (1893): 219.

38. *OR*, 10 (pt. 1): 610–11.

39. Kirwan, *Johnny Green*, 30; "Byrne's Battery," in John Joyce Jr. Papers, FC; Thompson, *History of the Orphan Brigade*, 104–5.

40. *OR*, 10 (pt. 1): 436–37; *Memphis Appeal*, April 10, 1862.

41. Magee Diary, April 7, 1862, DU; *Memphis Appeal*, April 10, 1862.

42. Larry J. Daniel, *Shiloh: The Battle That Changed the Civil War* (New York, 1997): 286–87.

43. Thomas Jordan, "Notes of a Confederate Staff Officer at Shiloh," *B & L* 1:603; Giles B. Cook Shiloh Report (undated), VHS; *OR*, 10 (pt. 1): 412, 611, 613.

44. Shoup, "How We Went to Shiloh," 140.

45. Ibid.

46. *OR*, 10 (pt. 2): 398, 399, 400; Thompson, *History of the Orphan Brigade*, 859.

47. *OR*, 32 (pt. 3): 698–99, 702–5; Bearss, "Artillery Study," SNMP.

Chapter 4. "Enough of Kentucky"

1. Civil War Centennial Commission, *Tennesseans in the Civil War*, 1:120, 127, 145, 149; Rowland, *Mississippi Statistical Register*, 852–69; Hughes, *Pride of the Confederate Artillery*, 54; Searcy to Reuben, April 20, 1862, James Searcy Letters, ADAH; Brewer, *Alabama*, 698, 702; *OR*, 10 (pt. 1): 548–51; Crute, *Units of the Confederate Army*, 62; Ray Mathis, ed., *In the Land of the Living: Wartime Letters by Confederates from the Chattahoochee Valley of Alabama and Georgia* (Troy, Ala., 1981), 23; *Supplement to the Official Records* (Wilmington, N.C., 1994–2001) (hereafter cited as *SOR*), 23:162, 165. Initially Henry Baker's and Ed Baxter's companies were a single unit under Captain George H. Monsarrat. An artilleryman nonetheless wrote: "I

must say that Captain Monsarrat was never with the company." Phillip Neely Matlock Memoir, Confederate Collection, box 14, folder 3, TSLA.

2. "Bledsoe of Missouri," *CV* 7 (October 1899): 462–63; William Garrett Piston and Thomas P. Sweeney, "Don't Yield an Inch: The Missouri State Guard," *North and South* 2 (June 1999): 21; Jeffrey L. Patrick, ed., "The Memoirs of Lieutenant William P. Barlow, Guibor's Battery, Missouri State Guard," *Journal of the American Civil War* 5 (1997): 29–30, 51; "The Storey [*sic*] of Guibor's Battery, C.S.A.," box 1, Civil War Papers, Missouri Historical Society; William C. Winter, "Amidst Trials and Troubles: Captain Samuel Churchill Clark, C.S.A.," *Missouri Historical Review* 92 (October 1997): 2–3, 16–17; Special Order 43, April 23, 1862, General and Special Orders by Colonel M. L. Clark, chap. 4, vol. 212, NARG 109; General Order No. 4, May 3, 1862, Headquarters Artillery Brigade, April 24, 1862, and James P. May to Colonel Standish, June 10, 1862, Army of the West, Letters Sent, chap. 2, vol. 266, NARG 109; *OR*, 8:796, 10 (pt. 2): 495.

3. *OR*, 32 (pt. 3): 697, 700, 701; Lester N. Fitzhugh, ed., *Cannon Smoke: The Letters of Captain John J. Good: Good-Douglas Texas Battery, C.S.A.* (Hillsboro, Tx., 1971), vi–vii, 188, 195.

4. Lindsley, *Military Annals*, 791, 795; Grammer Diary, May 8, 1862, VNMP; Pugh to May, April 11, 1862, Richard Pugh Letters, LSU; Owen, *In Camp and Battle*, 412–13; Hughes, *Pride of the Confederate Artillery*, 46.

5. Brown, "History of Stanford's Mississippi Battery," GPL; Searcy to mother, May 18, 1862, Searcy Letters, ADAH.

6. Carnes, memoirs, 22–25.

7. *OR*, 10 (pt. 2): 642; Welker, *Keystone Rebel*, 90; Hughes, *Pride of the Confederate Artillery*, 45.

8. Searcy to Evie, May 5, 1862, to father, May 8, 1862, to mother, May 8, 1862, Searcy Letters, ADAH; Hughes, *Pride of the Confederate Artillery*, 46; Welker, *Keystone Rebel*, 86.

9. *OR*, 10 (pt. 1): 806, 809, 819–20, 830–31; Hughes, *Pride of the Confederate Artillery*, 48.

10. Searcy to mother, May 12, 1862, Searcy Letters, ADAH.

11. Pugh to wife, May 16, 17, 1862, Pugh Letters, LSU.

12. Magee Diary, May 27–28, 1862, DU.

13. Jones Diary, May 31, 1862, GPL; Hughes, *Pride of the Confederate Artillery*, 54, 56–57, 72.

14. Searcy to father, June 20, 1862, to mother, June 24, 1862, Searcy Letters, ADAH.

15. Searcy to Stella, July 16, 1862, Searcy Letters, ADAH; Magee Diary, June 10, 1862, DU.

16. Carnes, memoirs, 46.

17. Hughes, *Pride of the Confederate Artillery*, 56–57.

18. "Summary of Ordnance and Ordnance Stores on Hand, May 21, 1862, Grenada, Miss.," box 31-G, Army of Mississippi Papers, DU; *OR*, 16 (pt. 2): 741.

19. *OR*, 16 (pt. 2): 731; Magee Diary, July 24, 25, 30, 1862, DU; Grammer Diary, August 9, 1862, MDAH; Jones Diary, August 5, 1862, GPL.

20. Grammer Diary, August 9, 1862, MDAH; Lindsley, *Military Annals*, 811; Magee Diary, July 24, 25, August 9, 1862, DU.

21. Vaught quoted in Hughes, *Pride of the Confederate Artillery*, 59.

22. Hughes, *Pride of the Confederate Artillery*, 59; Little and Maxwell, *History of Lumsden's Battery*, 10–11.

23. Magee Diary, August 9, 1862, DU; Semple to wife, August 9, 19, 1862, Henry Semple Papers, ADAH.

24. William R. Talley, "History of Havis' Georgia Battery," Kennesaw Mountain National Military Park (hereafter cited as KNMP.)

25. "Leigh" Letter in *Memphis Appeal*, August 26, 1862.

26. *Chattanooga Rebel*, September 25, 1862; *SOR* 32:574; Magee Diary, August 16, 1862, DU; Searcy to father, August 25, 1862, Searcy Letters, ADAH; Semple to Hardee, November 28, 1862, Semple Papers, ADAH; *OR*, 10 (pt. 2): 503. There is no contemporary breakdown of the armament composition. My best guess is that Smith's, Scott's, Ketchum's, Waters's, Swett's, Calvert's, Darden's, Palmer's, and Barret's batteries comprised two 6-pounder and two 12-pounder howitzers each. Carnes had four 6-pounders, Stanford four 3-inch rifles, and Lumsden two smoothbores and two rifles, calibers unknown. It is believed that Robertson had six 12-pounder Napoleons, Semple four 12-pounder Napoleons and two 3.8-inch rifles, and the Washington Artillery a pair each of 6-pounder, 12-pounder howitzers, and 3.3-inch rifles.

27. Talley, "History of Havis' Georgia Battery," KNMP; Grammer Diary, August 25, 1862, MDAH; Jones Diary, September 2, 1862, GPL.

28. *SOR* 3:256–58.

29. "Leigh" Letter in *Memphis Appeal*, October 16, 1862.

30. Nathaniel Hughes, *General William J. Hardee: Old Reliable* (Baton Rouge, 1965), 128; Connelly, *Autumn of Glory*, 263; Head, *Campaigns and Battles*, 236–38; W. W. Carnes, "Artillery at the Battle of Perryville, Ky.," *CV* 23 (1935): 8.

31. *OR*, 16 (pt. 1): 345, 1133, 1041. "Leigh" Letter in *Memphis Appeal*, November 8, 1862; Jones Diary, October 8, 1862, GPL. See also Kenneth Hafendorfer, *Perryville: Battle for Kentucky* (Owensburg, Ky., 1981), 191–92.

32. Little and Maxwell, *History of Lumsden's Battery*, 12; Searcy to mother, October 25, 1862, ADAH. Hafendorfer (*Perryville*, 233) places the Lumsden incident at two thirty. Because Lumsden's After Action Report is missing, it is difficult to give precise times. *OR*, 16 (pt. 1): 1055.

33. *OR*, 16 (pt. 1): 1157; Melancthon Smith, "Melancthon Smith's Battery," *CV* 12 (November 1904): 532.

34. Hafendorfer, *Perryville,* 251, 271.

35. *SOR* 2:665–67.

36. *OR,* 16 (pt. 1): 345, 1041, 1133.

37. Ibid., 1108, 1157; 52 (pt. 1): 53.

38. Smith, "Melancthon Smith's Battery," 532; Little and Maxwell, *History of Lumsden's Battery,* 13; Semple to Hardee, November 28, 1862, Semple Papers, ADAH; Magee Diary, October 16, 1862, DU.

39. Semple to Buckner, n.d., Semple Papers, ADAH.

40. Searcy to sister, October 27 1862, Searcy Letters, ADAH; Jones Diary, October 29, 1862, GPL; Magee Diary, October 25, 1862, DU; Hughes, *Pride of the Confederate Artillery,* 73.

Chapter 5. Failed Lessons: Stones River

1. Grammer Diary, November 1–22, 1862, VNMP; Little and Maxwell, *History of Lumsden's Battery,* 13–14; Semple to wife, December 9, 1862, Semple Papers, ADAH; Property Return of the Artillery of Cheatham's Division, Polk's Corps, December 4, 1862, Melancthon Smith Military Service File, NARG 109.

2. *OR,* 10 (pt. 2): 399–400; *SOR,* 17:724–29, 772, 784, 786–87.

3. *Chattanooga Daily Rebel,* December 17, 1862; *Memphis Appeal,* December 13, 1862; *Mobile Advertiser and Register,* December 18, 1862; James Robert Maxwell, *Autobiography of James Robert Maxwell of Tuscaloosa, Alabama* (New York, 1926), 157; *OR,* 17 (pt. 2): 753, 757, 783–84, 787, 793, 800, 810; 10 (pt. 2): 412–13, 435, 436, 441, 444, 450, 462; 22 (pt. 2): 832–33.

4. *OR,* 32 (pt. 3): 697, 700, 701; Fitzhugh, *Cannon Smoke,* vi–vii, 195; "Maj. James P. Douglas," *CV* 10 (July 1902): 322; Brewer, *Alabama,* 700.

5. J. Adolphe Chalaron, "Memories of Rice Graves, C.S.A.," *Daviess County Historical Quarterly* 3 (1985): 4; Hughes, *Pride of the Confederate Artillery,* 79–80; "Some Comments on Tablets on Lookout Mountain," W. W. Carnes Papers, CCNMP.

6. *OR,* 10 (pt. 1): 709, 814, 875, (pt. 2): 399–400, 433, 465.

7. *OR,* 10 (pt. 2): 399; Semple to Buckner, November 28, 1862, Semple Papers, ADAH.

8. *OR,* 16 (pt. 1): 1157; 10 (pt. 1): 733, 758, 909, (pt. 2): 235–41; "List of Batteries Receiving Leeds and Company Guns," April 29, 1862, Letters Sent, Ordnance Officer, Army of Tennessee, chap. 4, vol. 141, NARG 109; Rice E. Graves Report, January 25, 1863, John C. Breckinridge Papers, New York Historical Society (hereafter cited as Graves Report, NYHS).

9. Semple to wife, December 19, 1862, Semple Papers, ADAH.

10. *OR,* 20 (pt. 1): 235–41, 838, (pt. 2): 431–32, 500–501; Graves Report, NYHS. At Murfreesboro, Bragg had one two-gun, seventeen four-gun, and six six-gun batteries.

11. Edwin C. Bearss, "Cavalry Operations in the Battle of Stones River," *Tennessee Historical Quarterly* (hereafter cited as *THQ*) 19 (March 1960): 40–41; *OR*, 20 (pt. 1): 453, 464, 965.

12. *OR*, 10 (pt. 1): 782, 825, 837; Graves Report, NYHS.

13. Chalaron, "Memories of Rice Graves," 5; *OR*, 10 (pt. 1): 782, 829.

14. Chalaron, "Memories of Rice Graves," 5–6; Graves Report, NYHS.

15. *OR*, 10 (pt. 1): 268, 280, 705, 748, 925, 943; John K. Street to wife, January 3, 1863, John K. Street Letters, SHC. Lieutenant Colonel Hallonquist had warned the battery commanders about bringing caissons too close to the firing line, that they instead should be kept a quarter of a mile in the rear of the pieces. Lieutenant Colonel James H. Hallonquist circular, November 23, 1862, Bragg Papers, Letters Sent, chap. 2, vol. 311, NARG 109.

16. "Leigh" Letter, *Memphis Appeal*, January 22, 1963.

17. *OR*, 20 (pt. 1): 672.

18. Lindsley, *Military Annals*, 818.

19. James L. McDonough, *Stones River: Bloody River in Tennessee* (Knoxville, 1980), 75, 78; Connelly, *Autumn of Glory*, 54; *OR*, 20 (pt. 1): 235–36, 302, 320, 325.

20. *OR*, 20 (pt. 1): 775, 937.

21. Ibid., 926, 956, 871; Grammer Diary, December 31, 1863, MDAH.

22. *OR*, 20 (pt. 1): 872, 966–97. White operated with only three pieces during this time, one gun having been captured.

23. Magee Diary, December 31, 1862, DU; *OR*, 20 (pt. 1): 666, 735–40, 842; Lindsley, *Military Annals*, 816; Christopher Losson, *Tennessee's Forgotten Warriors: Frank Cheatham and His Confederate Division* (Knoxville, 1989), 84.

24. *OR*, 20 (pt. 1): 407; Peter Cozzens, *No Better Place to Die: The Battle of Stones River* (Urbana, 1990), 141–42.

25. Magee Diary, December 31, 1862, DU; *OR* 20 (pt. 1): 166, 842; Lindsley, *Military Annals*, 816; "Leigh" Letter, *Memphis Appeal*, January 22, 1863.

26. *OR*, 20 (pt. 1): 803, 783–84, 805, 823, 909; Graves Report, NYHS. Byrne's battery disbanded in May 1862, but a new battery was subsequently organized.

27. *OR*, 20 (pt. 1): 880; Connelly, *Autumn of Glory*, 158.

28. *OR*, 20 (pt. 1): 855.

29. Ibid., 455, 471, 479, 521, 722, 732, 742, 756–77; McDonough, *Stones River*, 175.

30. Graves Report, NYHS; *OR*, 20 (pt. 1): 668.

31. *OR*, 20 (pt. 1): 759–60.

32. McDonough, *Stones River*, 179; Connelly, *Autumn of Glory*, 83; William C. Davis, *Breckinridge: Statesman, Soldier, Symbol* (Baton Rouge, 1974): 342, 351–52; Alexander F. Stevenson, *The Battle of Stone's River* (reprint, Dayton, 1983), 143n1, relates Robertson's supposed admission of perjury.

33. *OR*, 20 (pt. 1): 785, 803, 823; Graves Report, NYHS.

34. Connelly, *Autumn of Glory*, 63; McDonough, *Stones River*, 185.

35. Graves Report, NYHS; *OR*, 20 (pt. 1): 786.

36. *OR*, 20 (pt. 1): 823.

37. Graves Report, NYHS.

38. Connelly, *Autumn of Glory*, 65; Davis, *Breckinridge*, 344; Edwin C. Bearss, "Stones River: The Artillery at 4:45 P.M., January 2, 1863," *Civil War Times Illustrated* 2 (February 1964): 38–39; Thomas L. Crittenden, "On the Union Right at Stone's River," *B & L* 3:633.

39. *OR*, 20 (pt. 1): 837–38; Little and Maxwell, *History of Lumsden's Battery*, 15; Davis, *Breckinridge*, 344. Robertson would later claim that Tarrent's two guns opened before the attack, which tipped the Federals in advance. *OR*, 20 (pt. 1): 760.

40. Davis, *Breckinridge*, 345; W. T. Charles, *Recollections of a Christmas* (privately published, 1959), 27.

41. *OR*, 20 (pt. 1): 787, 803, 824, 910–11; Chalaron, "Memories of Rice Graves," 8–9; Paper by Robert L. Chambliss, Semple Papers, ADAH.

42. Graves Report, NYHS; Paper by Robert C. Chambliss, Semple Papers, ADAH.

43. *OR*, 20 (pt. 1): 761, 803. Pritchard's two-gun section was in a fixed fortification in Murfreesboro.

44. Ibid., 824.

45. Magee Diary, January 2, 1863, DU; *OR*, 20 (pt. 1): 676–81, 233, 242.

46. McWhiney and Jamieson, *Attack and Die*, 118–19, 124.

47. *OR*, 20 (pt. 1): 722, 751, 804.

48. McWhiney and Jamieson, *Attack and Die*, 118–19, 124.

Chapter 6. "All Hands Fixing Up the Battery"

1. R. Lockwood Tower, ed., *A Carolinian Goes to War: The Civil War Narrative of Arthur Middleton Manigault* (Columbia, S.C., 1983), 73; Lucia R. Douglas, ed., *Douglas' Texas Battery, C.S.A.* (Waco, Tx., 1966), 64.

2. Carnes, memoirs, 117–18.

3. Grammer Diary, January 27, 1863, MDAH; Magee Diary, March 6, 1863, DU.

4. General Order 34, 35, 37, Department of Tennessee, Orders and Circulars, 1862–1865, entry 86, NARG 109.

5. Douglas to Sallie, April 21, May 10, 1863, Douglas, *Douglas' Texas Battery;* Massina Diary, April 7, 1863, Emory University.

6. Hughes, *Pride of the Confederate Artillery*, 94.

7. Jones Diary, April 27–May 11, 1863, GPL.

8. *OR*, 20 (pt. 2): 493, 23 (pt. 2): 649–50.

9. Ibid., 23 (pt. 2): 806; "Artillery Strength, February and March 1863," Bragg Papers, Western Reserve Historical Society, Cleveland, Ohio (hereafter cited as WRHS); *Memphis Appeal*, April 8, 1863.

10. "Statement of Guns on Hand, April 30, 1863," Bragg Papers, WRHS; Connelly, *Autumn of Glory*, 115; "Inspection of Polk's Batteries by Felix H. Robertson, February 1, 1863," Inspection Reports and Related Records Received by the Inspec-

tion Branch of the Confederate Adjutant General's Office, NARG 109 (hereafter cited as AGIR).

11. "Returns in Detail, Army of Tennessee, March 1863," Bragg Papers, WRHS; Connelly, *Autumn of Glory,* 115; "Inspection of Polk's Batteries by Felix H. Robertson, February 1, 1863," AGIR.

12. *OR,* 23 (pt. 2): 59, 843; E. T. Sykes, *Walthall's Brigade* (Columbus, Miss., 1905), 525.

13. Connelly, *Autumn of Glory,* 114–15; "Inspection of Polk's Artillery, February 1, 1863," AGIR.

14. "Return in Detail, Army of Tennessee Allowances for Baggage, March 1863," Bragg Papers, WRHS.

15. "Inspection of Polk's Artillery, February 1, 1863," AGIR.

16. *OR,* 20 (pt. 1): 753, 768, 770, 23 (pt. 2): 882; Semple to wife, March 15, 1863, Semple Papers, ADAH.

17. *OR,* 23 (pt. 2): 763; Oladowski to Gorgas, October 23, 1863, Letters Sent, Ordnance Officer, Army of Tennessee, chap. 4, vol. 41, NARG 109 (hereafter cited as ATOR); Mallet to Oladowski, May 28, 1863, and Mallett to Gorgas, May 28, 1863, Central Ordnance Laboratory Letterbook, chap. 4, vol. 28, NARG 109.

18. "Inspection of Polk's Artillery, May 9, 1863," AGIR; Magee Diary, DU.

19. Oladowski to Brent, January 5, 1863, and Oladowski to Gorgas, January 22, 1863, ATOR; *Memphis Appeal,* March 27, 1863; "Report of Ordnance and Ordnance Stores Passing through Atlanta, March 1863–June 1864," chap. 4, vol. 87, NARG 109.

20. "Property Report of Cheatham's Division," May 28, 1863, Melancthon Smith Military Service File, NARG 109.

21. Oladowski to Humphreys, March 14, 1863, Oladowski to Wright, August 13, 1863, ATOR; "Statement of Ammunition on Hand, Army of Tennessee, April 30, 1863," Bragg Papers, WRHS.

22. "Inspection of Polk's Artillery February 1 and May 9, 1863," AGIR; Swett Memoirs, 30, SNMP; General Order 74, April 7, 1863, Department of Tennessee, Orders and Circulars, 1862–1865, entry 86, NARG 109.

23. Oladowski to Wright, January 21, 1863, Oladowski to Rains, October 11, 1863, ATOR; "Inspection of Polk's Artillery, May, 1863," AGIR.

24. *OR,* 20 (pt. 1): 768, 771, 23 (pt. 2): 763; Hallonquist to Oladowski, January 26, 1863, James H. Hallonquist, Military Service File, National Archives; Oladowski to Wright, January 13, 1863, Oladowski to Gorgas, March 9, 1863, ATOR.

25. James C. Hazlett, "The Napoleon Gun: Its Origin and Introduction into American Service," *Military Collector and Historian* 15 (Spring 1963): 1–2; Ripley, *Artillery in the Civil War,* 26–27, 366.

26.Oladowski to Gorgas, March 9, 1863, ATOR; *OR,* 23 (pt. 2): 967–69.

27. G. W. Rains, *History of the Confederate Powder Works* (Augusta, 1882), 30; James C. Hazlett, "The Confederate Napoleon Gun," *Military Collector and Historian* 14 (Winter 1964): 108; *Memphis Appeal,* March 27, 1863; Arthur James L. Fre-

mantle, *Three Months in the Southern States: April–June 1863* (New York, 1864), 176; Robert L. Thompson, "From Missionary Ridge to Dalton," *CV* 14 (1906): 406; James C. Hazlett, Edwin Olmstead, and M. Hume Parks, *Field Artillery Weapons of the Civil War* (Newark, 1983), 104, 283.

28. *Charleston Courier,* March 11, 1863; Oladowski to Gorgas, February 28, 1863, ATOR; *OR,* 23 (pt. 4): 656–57, 23 (pt. 2): 762–63; *Macon Telegraph,* June 13, 1863; "List of Guns and Their Makers, Walker's Division, Army of Mississippi," 1863, MDAH; Charles B. Dew, *Ironmaker to the Confederacy: Joseph R. Anderson and the Tredegar Iron Works* (New Haven, Conn.: Yale University Press, 1966), 190; "Statement of Guns on Hand, April 30, 1863," Bragg Papers, WRHS.

29. "Statement of Guns on Hand," April 30, 1863," Bragg Papers, WRHS; *OR,* 23 (pt. 2): 843.

30. Oladowski to Wright, May 22, 1863, ATOR; Swett Memoirs, 32, SNMP.

31. Oladowski to W. A. Taylor, June 1, 1863, Oladowski to Wright, July 23, 1863, ATOR.

32. *OR,* 23 (pt. 2): 967–69, 20 (pt. 2): 1, 778; "Monthly Inspection Report, May 1, 1863, Army of the Cumberland," entry 1058, NARG 393.

Chapter 7. Of Officers and Organization: The Artillery Infrastructure

1. Connelly, *Autumn of Glory,* 27, 30–31. The army chief of ordnance, Hypolite Oladowski, was also a participant in the Pensacola-Mobile bloc. See Thomas R. Hay, ed., *Cleburne and His Commander by Irving R. Buck* (Jackson, Tenn., 1959), 204.

2. *OR,* 10 (pt. 2): 503, 23 (pt. 3): 706; James H. Hallonquist, Military Service File, NARG 109; Bragg to Powell, March 25, 1862, Bragg Papers, WRHS; "1887 Annual Reunion of the Association of Graduates, U.S. Military Academy, West Point, New York," United States Military Academy Library, 78.

3. Hallonquist to Oladowski, January 26, 1863, "Report of Experiments Made at Estelle Springs, March 31, 1863," and Hallonquist to Oladowski, November 11, 1863, James H. Hallonquist, Military Service File, NARG 109.

4. Colgin, "The Life Story of Brig. Gen. Felix Robertson," 154–55; Ezra J. Warner, *Generals in Gray* (Baton Rouge, 1959), 260–61; *OR,* 23 (pt. 3): 688; Robertson to L. P. Walker, February 23, 1861, and Special Order No. 80, April 20, 1861, Felix Robertson, Military Service File, NARG 109.

5. Talley, "History of Havis' Georgia Battery," 27–28, KNMP; Little and Maxwell, *History of Lumsden's Battery,* 32–33.

6. Davis, *Breckinridge,* 351–52; Connelly, *Autumn of Glory,* 83; Bragg to Adjutant General, February 24, 1863, Felix H. Robertson, Military Service File, National Archives.

7. Pickering, "Washington Artillery of Augusta, Ga.," 25.

8. Captain Thomas Stanford, commissioned in May 1861, was killed in May 1864, never having been promoted. Captain Charles Lumsden, a graduate of the Virginia Military Institute, likewise never made field grade. *Register of Former Cadets* (Lexington, Va., 1957), 28.

9. *OR*, 23 (pt. 2): 724; Petition to the Honorable James A. Seddon, March 16, 1863, Melancthon Smith, Military Service File, NARG 109; Bragg to Cooper, June 15, 1863, Bragg Papers, Letters Sent, chap. 2, vol. 359, NARG 109.

10. Pickering, "Washington Artillery of Augusta, Ga.," 25.

11. John W. Morton, *The Artillery of Nathan Bedford Forrest's Cavalry* (Kennesaw, Ga., 1962), 45–47; "Forrest's Chief of Artillery: Morton," *CV* 8 (1900): 171; "Young Artillery Captains," *CV* 6 (1895): 175. Forrest later referred to Morton as that "little bit of kid with the big backbone."

12. *OR*, 32 (pt. 3): 688, 700; Civil War Centennial Commission, *Tennesseans in the Civil War*, 1:143; Stewart to Cooper, May 5, 1863, series 50, vol. 43, no. 22, RG 9, MDAH; "Major John W. Eldridge," *CV* 21 (July 1913): 352.

13. *OR*, 20 (pt. 1): 776, 844, 849, 38 (pt. 3): 688, 700.

14. Semple to Mackall, August 17, 1863, Endorsement of J. H. Hallonquist, August 21, 1863, Cleburne to Hill, August 19, 1863, Semple Papers, ADAH.

15. Bragg to Cooper, June 15, 1863, Letters Sent, chap. 2, vol. 359, Bragg Papers, NARG 109; General Orders No. 119, July 22, 1863, Bragg Papers, WRHS.

16. *Chattanooga Rebel*, October 28, 1862; Robert L. Krick, *Lee's Colonels: A Biographical Register of the Field Officers of the Army Northern Virginia* (Dayton, 1979), 90; Evans, *Confederate Military History* 3:813; Robert L. Krick, "Defending Lee's Flank: J. E. B. Stuart, John Pelham, and Confederate Artillery on Nicodemus Heights," 194, 213, in Gary W. Gallagher, ed., *The Antietam Campaign* (Chapel Hill, 1999).

17. Goelet to mother and sister, January 30, 1863, in Goelet-Bumcombe Papers, SHC. The term "battalion," though not formally adopted in Bragg's army until the spring of 1863, was commonly used by artillerymen prior to that time. See, for example, Magee Diary, August 16, 1862, DU; Grammer Diary, June 18, 1862, MDAH.

18. Connelly, *Autumn of Glory*, 118, 125; *OR*, 20 (pt. 2): 499.

19. Alexander, "Confederate Artillery Service," 102; *OR*, 33 (pt. 3): 744.

20. *OR*, 23 (pt. 2): 774, 830–31; General Orders No. 76, April 9, 1863, Hypolite Oladowski Papers, DU; Goelet to mother and sister, June 22, 1863, in Goelet-Buncombe Papers, SHC.

21. *OR*, 20 (pt. 1): 661; Civil War Centennial Commission, *Tennesseans in the Civil War*, 1:125.

22. "Report of Ordnance and Ordnance Stores, Horses, Mules, etc., Reserve Artillery, April 30, 1863," Felix H. Robertson, Military Service File, National Archives; *OR*, 20 (pt. 2): 493; 23 (pt. 2): 862.

23. Talley, "History of Havis' Georgia Battery," KNMP.

24. Civil War Centennial Commission, *Tennesseans in the Civil War*, 1:131, 157;

Wiggins' Battery, Military Service File, National Archives; *OR*, 20 (pt. 1): 65. Byrne's battery was attached to Morgan's brigade and was subsequently captured, along with the entire unit, in Morgan's Ohio raid.

25. Morton, *Artillery of Nathan Bedford Forrest's Cavalry*, 52–53, 57.

26. Ibid., 87–98; Civil War Centennial Commission, *Tennesseans in the Civil War*, 1:132; Jones Diary, May 22, 1863, GPL.

Chapter 8. A Fateful Autumn

1. Overton W. Barret to mother, June 11, 1863, in Army of Tennessee Miscellaneous Papers, 1862–1865, DU.

2. *OR*, 23 (pt. 1): 534.

3. Magee Diary, July 2, 1863, DU; Wiggins' Battery, Military Service File, NARG 109; Laurence D. Schiller, "Two Tales of Tennessee: The Ups and Downs of Cavalry Command," *North and South* 4 (April 2001): 82–85.

4. Douglas, *Douglas' Texas Battery*, 69–70.

5. Oladowski to Mackall, July 14, 1863, ATOR; Sidney B. Wilder, "Sketch of Semple's Battery: Its Record in the Great War," Internet, U.S. Military History/Civil War Unit Histories/Semple's Battery (accessed under general heading of "Alabama Artillery Batteries").

6. *OR*, 23 (pt. 2): 940–44.

7. "Report of Cheatham's Division of Artillery, Army of Tennessee, Commanded by Maj. M. Smith, July 14, 1863," Melancthon Smith, Military Service File, NARG 109.

8. Magee Diary, August 6–8, 1863, DU; Brown Memoir, GPL; Grammer Diary, August 6, 1863, MDAH.

9. Connelly, *Autumn of Glory*, 156; James W. Bondurant, Military Service File, NARG 109.

10. Goelet to mother and sister, August 27, 1863, in Goelet-Buncombe Papers, SHC.

11. Richard A. Baumgartner, *Blue Lighting: Wilder's Mounted Infantry Brigade in the Battle of Chickamauga* (Huntington, W.Va., 1997), 74–75; *Memphis Appeal*, August 28, 1863; *OR*, 30 (pt. 3): 123, (pt. 4): 531.

12. Isaac Thomas to wife, September 17, 1863, Isaac Thomas Letters, GPL.

13. *OR*, 30 (pt. 1): 233–36.

14. Ibid., (pt. 2): 420, 448–50; McMurry, *Virginia Military Institute*, 152; Mary Elizabeth Sergeant, "They Lie Forgotten," 187, U.S. Military Academy Library, West Point, N.Y.; Civil War Centennial Commission, *Tennesseans in the Civil War*, 1:141; Owen, *In Camp and Battle*, 263–65.

15. Hughes, *Pride of the Confederate Artillery*, 121; Carl Moneyhon and Bobby Roberts, *Portraits of Conflict: A Photographic History of South Carolina in the Civil War* (Fayetteville, Ark., 1994) 212; *OR*, 30 (pt. 2): 595.

16. James R. Sullivan, *Chickamauga and Chattanooga Battlefields* (Washington, 1956), 12–13.

17. "Report of Guns Engaged, Ammunition Expended, etc. in the Army of Tennessee, commanded by General B. Bragg, C.S.A., at the Battle of Chickamauga, September 18, 19, 20, 1863," Letters Received by the Adjutant General's Office, NARG 109 (hereafter cited as "Report of Guns Engaged"). Just prior to the battle of Chickamauga, Huwald's battery of the horse artillery merged with the remains of Robinson's Louisiana Battery. See Gustave Huwald Manuscript, October 7, 1866, in Leroy Moncure Nutt Papers, SHC.

18. J. B. Warthen, "A Brief History of Howell's Battery of Light Artillery," Howell's Georgia Battery File, CCNMP; Evans, *Confederate Military History*, 7:906; Brown Diary, September 5, 1863, GPL.

19. Owens, *In Camp and Battle*, 273–74.

20. *OR*, 30 (pt. 4): 621, 632, 657, 658, 664, 665, (pt. 2): 147, 451; Wilder, "Sketch of Semple's Battery."

21. *OR*, 30 (pt. 2): 451–52, 493; Jerome B. Robertson, *Touched with Valor* (Hillsboro, Tex., 1964), 14.

22. Baumgartner, *Blue Lighting*, 1210–21; *OR*, 30 (pt. 2): 255, 269.

23. Morton, *Artillery of Nathan Bedford Forrest's Cavalry*, 117, 119; *SOR*, 5:704.

24. Glenn Tucker, *Chickamauga: Bloody Battle in the West* (reprint, Dayton, 1976), 128–37.

25. *OR*, 30 (pt. 2): 256, 270, 286.

26. Hughes, *Pride of the Confederate Artillery*, 124–28.

27. *OR*, 30 (pt. 2): 93, 117.

28. Lindsley, *Military Annals*, 822–23; Pickering, "Washington Artillery of Augusta, Ga.," 25; *OR*, 32 (pt. 2): 70; W. W. Carnes, "Chickamauga," *SHSP* 14 (1886): 399–400; Carnes, memoirs, 130–39. The colonel of the Seventh Indiana reported: "The regiment here suffered considerable loss, but not what it might have been had opportunity been given to discharge the pieces, as upon examination by our artillery officers they proved to be double-shotted with canister." *OR*, 30 (pt. 1): 811.

29. *OR*, 30 (pt. 2): 360, 450.

30. Peter Cozzens, *This Terrible Sound: The Battle of Chickamauga* (Urbana, Ill., 1992), 182–83; Steven Woodworth, *Chickamauga: A Battlefield Guide* (Lawrence, Kan., 1999), 29, 33; *OR*, 30 (pt. 2): 412; Brown Diary, September 19, 1863, GPL.

31. *SOR*, 5:703–4; *OR*, 30 (pt. 1): 535, 543–46, 555, 558; Huggins to Strange, undated, LeRoy Moncure Nutt Papers, SHC; Cozzens, *This Terrible Sound*, 186, 191–92; Smith, "Smith's Battery," 532.

32. Cozzens, *This Terrible Sound*, 264–66; *OR*, 30 (pt. 2): 174, 196; Douglas, *Douglas' Texas Battery*, 72.

33. *OR*, 30 (pt. 2): 229–30; Chalaron, "Memories of Rice Graves," 13; J. A. Chalaron, "Vivid Experience at Chickamauga," *CV* 3 (1895): 278–79; Hughes, *Pride of the Confederate Artillery*, 139–40.

34. *OR*, 30 (pt. 2): 215–16.

35. Ibid., 174–75, 183, 186, 196.

36. Ibid., 222, 256, 270, 287.

37. Ibid., 360, 382, 400, 465–66.

38. Cozzens, *This Terrible Sound*, 397–402; James F. Culpepper Letter, undated [postwar], personal collection.

39. *OR*, 30 (pt. 2): 459, 466; Cozzens, *This Terrible Sound*, 445.

40. *OR*, 30 (pt. 1): 782, (pt. 2): 358, 450.

41. *OR*, 30 (pt. 2): 292; Talley, "History of Havis' Georgia Battery," CCNMP; Cozzens, *This Terrible Sound*, 496.

42. Cozzens, *This Terrible Sound*, 497–98.

43. Culpepper Letter, undated, personal collection.

44. Swett Memoirs, SNMP.

45. *OR*, 30 (pt. 2): 417; Cozzens, *This Terrible Sound*, 473.

46. "Gracey-Chickamauga-Whitaker," *CV* 6 (1895): 251; *OR*, 30 (pt. 2): 525.

47. *OR*, 30 (pt. 2): 132, 360.

48. "Report of Guns Engaged," NARG 109; *OR*, 30 (pt. 2): 93, 287, 502.

49. *OR*, 30 (pt. 2): 37, 81, 159, 201, 244, 292, 307, 366, 420, 450, (pt. 1): 238–39; "Report of Guns Engaged," NARG 109.

50. *OR*, 30 (pt. 2): 202, 244, 292, 307, 420, 450.

51. *OR*, 30 (pt. 1): 238–39, (pt. 2): 41–42. The Northern and Southern lists of captures vary significantly. Although the latter is more detailed, it may not be as accurate, because it apparently included guns taken by the Yankees and retaken by the Confederates. Thus, Bragg claimed the capture of fifty pieces, whereas Rosecrans acknowledged the loss of thirty-nine.

Chapter 9. Artillery Disaster at Missionary Ridge

1. Neal to father, n.d., Neal Letters, Emory University; Morton, *Artillery of Nathan Bedford Forrest's Cavalry*, 127–28; John Snow Letter, September 30, 1863, Lumsden's Alabama Battery File, CCNMP.

2. Alexander, *Military Memoir*, 451; Klein, *E. P. Alexander*, 97; Gary W. Gallagher, ed., *Fighting for the Confederacy: The Personal Recollections of General Edward Porter Alexander* (Chapel Hill, 1989), 300.

3. Gallagher, *Fighting for the Confederacy*, 300.

4. Fairfax Downey, *Storming the Gateway: Chattanooga 1863* (New York, 1960), 147–48. In addition to the guns on Lookout Mountain, Rebel sharpshooters, backed by a section of Barret's Missouri Battery, occupied the high ground on the north bank of the Tennessee River around the bend, the so-called Suck. Richard A. Baumgartner and Larry M. Strayer, *Echoes of Battle: The Struggle for Chattanooga* (Huntington, W.Va., 1996), 172.

5. Connelly, *Autumn of Glory,* 255, 257, 262; E. P. Alexander, "Longstreet at Knoxville," *B & L* 3:746.

6. James G. Genco, *To the Sound of Musketry and Tap of the Drum* (Detroit, 1990), 122–24. For additional information on the ineffectiveness of the Rebel artillery fire, see Wiley Sword, *Mountains Touched with Fire: Chattanooga Besieged, 1863* (New York, 1995), 94–95; Royal W. Figg, *Where Men Only Dare to Go! Or the Story of a Boy Company (C.S.A.)* (Richmond, 1885), 155–58.

7. Massenburg's Georgia Battery, Military Service File, NARG 109; *OR,* 31 (pt. 3): 626; Neal to father, October 12, 1863, Neal Letters, Emory University.

8. Little and Maxwell, *History of Lumsden's Battery,* 25–26; Talley, "History of Havis' Georgia Battery, KNMP; Walton, *Behind the Guns,* 70; Frank Downs, "Major Robertson's Early Morning Attack on Federal Drill Camp," *Atlanta Journal,* March 1, 1902.

9. Anderson to Darden, October 19, 1863, J. T. Humphreys to Darden, October 19, 1863, Issues for Forage, October 14–18, 1863, Semple to chief of artillery, Hill's Corps, October 22, 1863, Semple Papers, ADAH; *Memphis Appeal,* November 7, December 4, 1863.

10. *OR,* 30 (pt. 2): 725, (pt. 4): 23–24, 38, 44–45, 59, 67–68, 102.

11. Hughes, *Pride of the Confederate Artillery,* 151; W. R. Montgomery to friend, October 16, 1863, Rowan Battery File, CCNMP; Neal to father, October 12, 1863, Neal Letters, Emory University.

12. Connelly, *Autumn of Glory,* 262.

13. Ibid., 250–52; Organization Circular, November 20, 1863, Bragg Papers, WRHS; Crute, *Units of the Confederate Army,* 39; Neal to father, November 20, 1863, Emory University.

14. Head, *Campaigns and Battles of the Sixteenth Tennessee Volunteers,* 245; Civil War Centennial Commission, *Tennesseans in the Civil War,* 1:137; *Memphis Appeal,* September 24, 1863.

15. Hughes, *Pride of the Confederate Artillery,* 154; *Selma Daily Reporter,* November 28, 1863.

16. "Report of Artillery Strength, November 7, 1863," "Report of the Artillery, October 31, 1863," Bragg Papers, WRHS.

17. Brown Memoir, GPL; Oladowski to Gorgas, November 5, 1863, to W. D. Humphreys, November 12, 1863, to Wright, November 19, 1863, to Cuyler, November 12, 1863, ATOR.

18. Jones Diary, November 9, 1863, GPL.

19. *OR,* 31 (pt. 2): 659, 662, (pt. 3): 634, 637, 645; Klein, *E. P. Alexander,* 98; Alexander, "Longstreet at Knoxville," 745–46; "Report of the Artillery, October 31, 1863," Bragg Papers, WRHS.

20. *OR,* 31 (pt. 2): 685. Captain W. W. Carnes vehemently disagreed with the precise placement of the National Park Service artillery markers on Lookout Mountain. He was ninety-four at the time, however, and reports support the National Park

Service. See Carnes to Richard B. Randolph, October 26, November 4, 10, 28, 1931, and Randolph to Carnes, November 13, 1931, December 15, 1931, W. W. Carnes Papers, CCNMP.

21. *OR*, 31 (pt. 2): 693–94, 717, 728; Tucker, "Battles for Chattanooga," 31; Baumgartner and Strayer, *Echoes of Battle*, 261; "People's Forum" article in W. W. Carnes Papers, CCNMP.

22. Connelly, *Autumn of Glory*, 273; Davis, *Breckinridge*, 386–97; *SOR*, 31:105.

23. "Consolidated Report of Guns Engaged at Missionary Ridge, November 24–25, 1863," Bragg Papers, WRHS.

24. *OR*, 31 (pt. 2): 740; Alexander, *Military Memoirs*, 475.

25. James C. Nisbet, *Four Years on the Firing Line* (Chattanooga, 1914), 249.

26. *OR*, 31 (pt. 2): 513–15.

27. Ibid., 748; W. W. Carnes, "At Missionary Ridge," *CV* 20 (May 1920): 185; *SOR*, 6:181.

28. John H. Bingham article, *CV* 12 (April 1904): 172; *OR*, 31 (pt. 2): 748–50; Grammer Diary, November 25, 1863, VNMP; *Memphis Appeal*, November 1, 1863; "Dr. Harvey Shannon," *CV* 15 (March 1907): 131–32. Semple's battery was detached to guard over Chickamauga Creek.

29. *OR*, 31 (pt. 2): 749; Hay, *Cleburne and His Command*, 170; Thomas J. Key, "Concerning the Battle of Missionary Ridge," *CV* 12 (August 1904): 390.

30. Baumgartner and Strayer, *Echoes of Battle*, 311–12.

31. Carnes, "At Missionary Ridge," 185; *OR*, 31 (pt. 2): 753. Peter Cozzens (*Shipwreck of Their Hopes* [Urbana, Ill., 1994], 449–50n33) indicates that I am wrong in my assertion that Stevenson's guns did not fire on Sherman's initial assault. I contend that his source (Carnes to Richard Randolph, November 20, 1931, Carnes Battery File, CCNMP) supports, not refutes, my conclusion. Those who are interested may wish to examine the record for themselves.

32. *SOR*, 6:176.

33. *OR*, 31 (pt. 2): 558–59.

34. Ibid., 79, 199, 230, 234, 278, 281, 288, 530; Joseph S. Fullerton, "The Army of the Cumberland," *B & L* 3:725–26.

35. *OR*, 31 (pt. 2): 234, 238, 310, 313, 525, 544; Cozzens, *Shipwreck of Their Hopes*, 265; Sword, *Mountains Touched with Fire*, 267, 271; Tower, *Carolinian Goes to War*, 138.

36. Fullerton, *Army of the Cumberland*, 725–26.

37. Cozzens, *Shipwreck of Their Hopes*, 294–95.

38. Baumgartner and Strayer, *Echoes of Battle*, 338.

39. Ibid., 323, 326; John Hoffman, *The Confederate Collapse at the Battle of Missionary Ridge* (Dayton, 1985), 42, 64–65; *OR*, 32 (pt. 3): 699; Tower, *Carolinian Goes to War*, 141.

40. "The Battle of Missionary Ridge," *Southern Bivouac* 2 (January 1884): 199–200.

41. Cozzens, *Shipwreck of Their Hopes,* 335; *OR,* 31 (pt. 2): 513, 515, 514, 32 (pt. 3): 699; Civil War Centennial Commission, *Tennesseans in the Civil War,* 1:151.

42. *OR,* 52 (pt. 1): 97; J. Adolphe Chalaron, "Missionary Ridge," Chalaron Papers, TU.

43. *OR,* 52 (pt. 1): 98, 32 (pt. 3): 704; Hughes, *Pride of the Confederate Artillery,* 161–63; Owen, *In Camp and Battle,* 414; Chalaron, "Missionary Ridge," Chalaron Papers, TU.

44. "Capt. Thomas L. Massenburg," *CV* 12 (December 1908): 630; "Reports of Guns Engaged, Ammunition Expended, etc. in Major F. H. Robertson's Command, 1st Battalion Reserve Artillery, November 24–25, 1863," Bragg Papers, WRHS; *Macon Telegraph,* December 5, 1863.

45. *OR,* 32 (pt. 3): 701; Mebane National Park Service Plaque, CCNMP; Havis Battery File, CCNMP.

46. *Memphis Appeal,* December 2, 1863; Thompson, *History of the Orphan Brigade,* 288; Fullerton, "Army of the Cumberland at Chattanooga," 725; *OR,* 32 (pt. 3): 703.

47. *SOR,* 6:107, 185, 187–88; Sam Davis Elliott, *Soldier of Tennessee: General Alexander P. Stewart and the Civil War in the West* (Baton Rouge, 1999), 151; Brown Memoir, GPL.

48. *SOR,* 6:181–83.

49. Sam R. Watkins, *Co. Aytch* (Jackson, Tenn., 1952), 125; Neal to Dear Emma, November 25, 1863, Neal Letters, EU.

50. *OR,* 31 (pt. 2): 743; Hughes, *Pride of the Confederate Artillery,* 166–67; Talley, "History of Havis' Ga. Battery," KNMP.

51. Nisbet, *Four Years on the Firing Line,* 253–54; *Mobile Advertiser and Register,* December 3, 1863; *Memphis Appeal,* November 17, 1863.

52. Ritter, "Sketch of the Third Maryland Artillery," 116–17.

53. Hay, *Cleburne and His Command,* 181; P. O. Stephenson, "Reminiscences of the Last Campaign of the Army of Tennessee, from May 1864 to January 1865," *SHSP* 12 (1884): 38–39; *OR,* 31 (pt. 2): 758–60.

54. "Report of Casualties in the Engagements before Chattanooga," "Consolidated Report of the Guns Engaged at Missionary Ridge, November 24–25, 1863," Bragg Papers, WRHS; *OR,* 31 (pt. 1): 99–100, 553–54; *Mobile Advertiser and Register,* December 3, 1863.

55. "Consolidated Report of the Guns Engaged at Missionary Ridge, November 24–25, 1863," Bragg Papers, WRHS; *OR,* 31 (pt. 1): 99–100, 553–54.

Chapter 10. Reorganization at Dalton

1. Hotchkiss Battalion, General Order No. 3, January 24, 1864, Semple Papers, ADAH; Hughes, *Stephenson,* 170.

2. Cate, *Two Soldiers,* 15; Grammer Diary, December 26, 1863, VNMP.

3. Neal to sister, March 25, 1864, Neal Letters, Emory University; Frank Goelet to mother and sister, April 4, 1864, Goelet-Buncombe Papers, SHC; Wiley, *Life of Johnny Reb,* 65; Brown Memoir, GPL; *Mobile Advertiser and Register,* March 30, 1864; *Atlanta Intelligencer,* April 1, 1864; Larry J. Daniel, *Soldiering in the Army of Tennessee: A Portrait of Life in a Confederate Army* (Chapel Hill, 1991), 121.

4. *OR,* 31 (pt. 3): 783, 788, 860, (pt. 2): 657–64; Army of Tennessee, General Orders No. 18, December 16, 1863, Semple Papers, ADAH; Civil War Centennial Commission, *Tennesseans in the Civil War,* 1:151; Grammer Diary, December 10, 1863, MDAH. A section of Massenburg's battery went to Waddell's battalion. *Macon Telegraph,* June 6, 1864.

5. Hardee to Ives, December 23, 1863, Bragg Papers, WRHS; *OR,* 31 (pt. 3): 856–57, 860.

6. *OR,* 31 (pt. 3): 826–28; Mebane Battery Requisition, December 31, 1863, Robert Cobb, Military Service File, NARG 109; List of Articles Required in the Artillery of Cheatham's Division, November 30, 1863, Melancthon Smith, Military Service File, NARG 109.

7. Statement of the Strength of the Army, December 20, 1863, Bragg Papers, WRHS; Howell's Georgia Battery, Muster Roll, December 31, 1863, NARG 109.

8. Cate, *Two Soldiers,* 31–32.

9. Neal to sister, March 8, 1864, Neal Letters, Emory University; Grammer Diary, February 6, April 6, 1864, MDAH; Hughes, *Stephenson,* 167, 170; Cate, *Two Soldiers,* 68–69; Richard M. McMurry, *John Bell Hood and the War for Southern Independence* (Lexington, Ky., 1982), 100; Benedict J. Semmes to wife, February 7, 1864, Benedict J. Semmes Letters, SHC; W. B. Shepard to wife, March 31, 1864, Benjamin F. Cheatham Papers, TSLA.

10. *Memphis Appeal,* January 21, 1864; Grammer Diary, February 21, 1864, MDAH; *OR,* 32 (pt. 3): 586, 670; "More about Re-Enlistments at Dalton," *CV* 10 (September 1902): 399; History of Fenner's Battery, August 8, 1891, Thomas C. Porteous Papers, LSU; Brewer, *Alabama,* 698–99.

11. *OR,* 32 (pt. 3): 731; William C. Ritter, "Sketch of the Third Battery," *SHSP* 12 (1883): 117; Hughes, *Stephenson,* 163, 166; Hughes, *Pride of the Confederate Artillery,* 175; Cate, *Two Soldiers,* 64.

12. Howard M. Madaus and Robert D. Needham, *The Battle Flags of the Confederate Army of Tennessee* (Milwaukee, 1976), 63, 66–67, 102; Neal to Dear Pa, March 26, 1864, A. J. Neal Letters, Emory University.

13. Brown Diary, GPL; Joseph E. Johnston, *Narrative of Military Operations* (reprint, Bloomington, Ind., 1959), 278–79; Lindsley, *Military Annals,* 434, 436; Mathis, *In the Land of the Living,* 89.

14. Ritter, "Sketch of the Third Battery," 436–37.

15. *OR,* 32 (pt. 2): 645, 697–98; Johnston, *Narrative,* 279; Jones Diary, January 19, 22, 1864, GPL.

16. *OR,* 32, (pt. 3): 694; *Macon Telegraph,* January 30, 1864.

17. *OR*, 33 (pt. 2): 697, 809; Johnston to Lawton, February 28, 1864, Joseph E. Johnston Papers, William and Mary.

18. *OR*, 32 (pt. 2): 817; Cate, *Two Soldiers*, 12–13.

19. Wise, *Long Arm of Lee*, 732–33.

20. *OR*, 32 (pt. 3): 685–86, 696, 731.

21. Ibid., 772–73.

22. Mathis, *In the Land of the Living*, 94.

23. Ralph W. Donnelly, "Confederate Copper," *Civil War History* 1 (December 1955): 355–70. Between January and June 1864, forty-one old guns were sent from Atlanta to Augusta for recasting. This amounted to more than twenty-five thousand pounds of copper and five thousand pounds of iron. Record of Receipts and Deliveries at the Atlanta Armory, December 1863–June 1864, vol. 17, NARG 109.

24. Rains to Oladowski, February 13, 1864, George W. Rains, Military Service File, NARG 109.

25. Oladowski to Gorgas, February 5, 1864, Oladowski to Rains, February 5, 1864, ATOR; Robertson to Oladowski, February 7, 1864, Felix H. Robertson, Military Service File, NARG 109; W. C. Duxbury Report, April 25, 1864, Ordnance Department Correspondence, vol. 3, RG 9, MDAH (hereafter cited as Duxbury Report, MDAH).

26. *OR*, 32 (pt. 3): 685.

27. James C. Hazlett, Edwin Olmstead, and M. Hume Parks, *Field Artillery Weapons of the Civil War* (Newark, 1983), 283–85, 112; Cate, *Two Soldiers*, 110.

28. Record of Receipts and Deliveries at the Atlanta Armory, December 1863–June 1864, chap. 4, vol. 18, NARG 109.

29. Hughes, *Stephenson*, 164–65; Mathis, *In the Land of the Living*, 93, 94.

30. Rains to Oladowski, February 13, March 11, 1864, George W. Rains, Military Service File, NARG 109; *OR*, 32 (pt. 3): 695, 699, 709.

31. Wright to Gorgas, February 12, 1864, Letters and Telegrams Sent, Atlanta Arsenal, chap. 4, vol. 16, NARG 109; Duxbury Report, MDAH; Cate, *Two Soldiers*, 68.

32. Ordnance Receipt, March 20, 1864, Cobb's Battalion, Robert Cobb, Military Service File, National Archives.

33. *Duxbury Report*, MDAH.

34. *OR*, 32 (pt. 2): 631, (pt. 3): 695; Monthly Inspection of Courtney's Battalion, February 2, 1864, Ordnance Department Correspondence, series 50, vol. 43, RG 9, MDAH; Orders and Circulars, Augusta Arsenal, NARG 109; Headquarters Artillery Regiment, Hardee's Corps, February 21, 1864, Melancthon Smith, Military Service File, NARG 109.

35. Johnston to Bragg, March 30, 1864, Joseph E. Johnston Papers, William and Mary; *OR*, 32 (pt. 3): 692, 695; Joseph Jones, "Roster of the Medical Officers of the Army of Tennessee," *SHSP* 23 (1894): 165–280; Tower, *Carolinian Goes to War*, 163–64.

36. Cate, *Two Soldiers,* 32; Lindsley, *Military Annals* 824; *OR,* 32 (pt. 3): 686, 688, 696.

37. *OR,* 32 (pt. 3): 731, 801; Requisition for Forage, Robertson's Battalion, May 11, 1864, Felix H. Robertson, Military Service File, NARG 109.

38. Neal to sister, February 24, 1864, Neal Letters, Emory University; Smith to A. G. Brown, May 5, 1864, Army of Tennessee Papers, NARG 109; Wise, *Long Arm of Lee,* 566–70; Klein, *E. P. Alexander,* 71; L. Van Loan Naiswald, *Grape and Canister: The Story of the Field Artillery of the Army of the Potomac, 1861–1865* (New York, 1960), 489–90; *OR,* 38 (pt. 1): 121.

39. *OR,* 32 (pt. 2): 697, (pt. 3): 691, 696, 706; W. B. Shepard to wife, March 31, 1864, Benjamin F. Cheatham Papers, TSLA.

40. Johnston to Bragg, March 30, 1864, Joseph E. Johnston Papers, William and Mary; *OR,* 32 (pt. 3): 613.

41. Wise, *Long Arm of Lee,* 733; J. W. Bondurant and Robert F. Beckham, Military Service Files, National Archives; Krick, *Lee's Colonels,* 52; Johnston to Bragg, March 30, 1864, Joseph E. Johnston Papers, William and Mary; *OR,* 32 (pt. 3): 706; *Biographical Register of the Officers and Graduates of the U.S. Military Academy from 1802 to 1867* (New York, 1879), 483.

42. *OR,* 32 (pt. 3): 584–85; Klein, *E. P. Alexander,* 105–6; Gallagher, *Fighting for the Confederacy,* 335–36.

43. *OR,* 32 (pt. 3): 592, 636. Lovell later served as volunteer aide on Johnston's staff.

44. Wise, *Long Arm of Lee,* 413, 418, 723–74; *OR,* 32 (pt. 3): 686, 688.

45. *OR,* 32 (pt. 3): 671.

46. Ibid., 714; J. W. Bondurant, Military Service File, NARG 109.

47. Ezra Warner, *Generals in Gray: Lives of the Confederate Commanders* (Baton Rouge, 1959), 275–76; *OR,* 32 (pt. 3): 671. Wise viewed Shoup's appointment over Carter as "another evidence of the advantage held by West Pointers." *Long Arm of Lee,* 734. Carter was a VMI graduate.

48. Cate, *Two Soldiers,* 68, 73, 74, 75; *OR,* 32 (pt. 3): 688, 742. In June, Shoup was detached to supervise construction of the Chattahoochee River defenses. F. A. Shoup, "Dalton Campaign—Works at Chattahoochee River," *CV* 3 (September 1895): 262–64.

49. *Mobile Advertiser and Register,* April 25, 1863; Smith to Dear Sir, January 3, 1864, Melancthon Smith, Military Service File, NARG 109; Robertson to Bragg, March 14, 1864, Bragg Papers, WRHS.

50. *OR,* 32 (pt. 3): 696; Wilson, "Bledsoe of Missouri," 462–63; McMurry, *Virginia Military Institute,* 163, 152.

51. E. B. Smith to Hotchkiss, January 21, 1864, Hotchkiss to Semple, February 1, 1864, Charges and Specifications vs. Henry C. Semple, February 29, 1864, and General Orders No. 34, April 15, 1864, Semple Papers, ADAH.

52. "Maj. John William Johnston," 117.

53. *OR*, 32 (pt. 3): 696.

54. Mathis, *In the Land of the Living*, 93.

55. Cooper to Bragg, April 5, 1864, Field Officers of the Army of Tennessee, n.d., Melancthon Smith, Military Service File, NARG 109.

56. Cate, *Two Soldiers*, 13, 89; Muster Roll, Semple's Alabama Battery, NARG 109; Inspection of the Artillery, September 20, 1864, AGIR; Carnes, memoirs, 10–11, 174.

57. Neal to father, March 14, 1864, Neal Letters, Emory University.

58. *OR*, 32 (pt. 3): 689–90, 697–98, 701–2, 705–6.

Chapter 11. Boots and Saddles: Retreat to Atlanta

1. Cate, *Two Soldiers*, 78–79.

2. Melancthon Smith, Journal of the Atlanta Campaign, May 17, 1864, Benjamin F. Cheatham Papers, TSLA; *OR*, 38 (pt. 1): 120–21, 480–81, 487, 825, (pt. 2): 472–77, 488, (pt. 3): 731–32, (pt. 4): 491, 518, 668, 676, 688; Requisitions for Forage, Robertson's Battalion, May 11, 1864, Felix H. Robertson, Military Service File, NARG 109.

3. *OR*, 38 (pt. 1): 481; Davis, *Diary of a Confederate Soldier*, 124; *Memphis Appeal*, May 11, 1864.

4. Zack C. Waters, ed., "Lines of Battle: Major General William B. Bate's Partial Reports of the Atlanta Campaign," 177, in Theodore P. Savas and David A. Woodbury, eds., *The Campaign for Atlanta and Sherman's March to the Sea* (Campbell, Calif., 1992); *Augusta Constitutionalist*, May 17, 1864.

5. *OR*, 38 (pt. 3): 873; Brewer, *Alabama*, 699; Richard M. McMurry, "Reseca: A Heap of Hard 'Fiten," *Civil War Times Illustrated* 11 (November 1970): 10.

6. *OR*, 38 (pt. 3): 677, 873; McMurry, "Reseca," 11.

7. Ritter, "Sketch of the Third Battery of Maryland Artillery," 186–87.

8. Tower, *Carolinian Goes to War*, 181; *OR*, 38 (pt. 3): 796–97; "Sketch of Semple's Battery," Semple Papers, ADAH; Lot D. Young, *Reminiscences of a Soldier of the Orphan Brigade* (Louisville, 1912), 83; Sykes, *Walthall's Brigade*, 568.

9. William C. Davis, ed., *Diary of a Confederate Soldier: John S. Jackman of the Orphan Brigade* (Columbia, SC, 1990), 124.

10. Hughes, *Pride of the Confederate Artillery*, 180–81; Davis, *Diary of a Confederate Soldier*, 124–25; Neal to father, May 15, 1864, A. J. Neal Letters, Emory University.

11. *OR*, 38 (pt. 3): 812–13; McMurry, "Reseca," 46–47; Hood, *Advance and Retreat*, 96; Philip L. Secrist, *The Battle of Reseca* (Macon, 1998), 47–57.

12. Brown Memoir, GPL; *Augusta Constitutionalist*, May 21, 1864.

13. *OR*, 38 (pt. 3): 945, (pt. 4): 720; Hay, *Cleburne and His Command*, 212. The four iron 6-pounders referred to by Hood, and confirmed in reports, were apparently old pieces previously placed for bridge defense.

14. *OR,* 38 (pt. 1): 65, 173, 185, 322, (pt. 3): 817; *SOR* 7:82; *Memphis Appeal,* May 25, June 8, 1864; "Sketch of Semple's Battery," Semple Papers, ADAH; Rowland, *Mississippi Statistical Register,* 883; Lindsley, *Military Annals,* 826; Jones Diary, May 15, 1864, GPL.

15. Richard M. McMurry, *Atlanta 1864: Last Chance for the Confederacy* (Lincoln, Neb., 2000), 72–73.

16. *OR,* 38 (pt. 4): 721–22.

17. Ibid., (pt. 3): 677, 873, (pt. 2): 610; "Guibor's Battery in Georgia," *Kennesaw Gazette,* May 15, 1889, 2.

18. *OR,* 38 (pt. 2): 752; Samuel French Diary, May 19, 1864, MDAH; John W. Powell, *Yankee Artilleryman: Through the Civil War with Eli Lilly's Indiana Battery* (Knoxville, 1975), 199; George S. Storrs, "The Artillery at Kennesaw," *Kennesaw Gazette,* June 15, 1889, 7.

19. Hood, *Advance and Retreat,* 104–6, 113–14; McMurry, *Atlanta 1864,* 82.

20. Homer L. Kerr, ed., *Fighting With Ross' Texas Cavalry Brigade, CSA* (Hillsboro, Tx., 1976), 144; Powell, *Yankee Artilleryman,* 210–11.

21. Richard M. McMurry, "The Hell Hole: New Hope Church," *Civil War Times Illustrated* (February 1973): 35.

22. Jones Diary, May 15, 1864, GPL.

23. Ridley, *Battles and Sketches,* 304; "History of Fenner's Battery," Thomas C. Porteous Papers, LSU; Jones Diary, May 15, 1864, GPL; *Memphis Appeal,* May 27, 1864; *OR,* 38 (pt. 3): 761. The casualties in Stanford's, Fenner's, and Oliver's batteries were eighteen, fifteen, and ten respectively.

24. *OR,* 38 (pt. 3): 677, (pt. 4): 491, 518.

25. Hay, *Cleburne and His Command,* 218–19; *OR,* 38 (pt. 3): 724–26; *Memphis Appeal,* June 2, 5, 1864.

26. *Memphis Appeal,* May 25, June 8, 1864; *OR,* 38 (pt. 3): 685, 873, 949.

27. *Memphis Appeal,* June 7, 1864.

28. Thompson, *History of the Orphan Brigade,* 249–50; Hughes, *Stephenson,* 183–84.

29. *Memphis Appeal,* June 21, 1864.

30. Albert Castel, *Decision in the West: The Atlanta Campaign of 1864* (Lawrence, Kan., 1992), 275–76, 280–81; Hughes, *Pride of the Confederate Artillery,* 189–90.

31. *Memphis Appeal,* June 17, 1863; Edward Noyes, ed., "Excerpts From the Civil War Diary of E. T. Eggleston," *THQ* 17 (December 1958): 347.

32. "Guibor's Battery in Georgia," *Kennesaw Gazette,* May 15, 1889, 2; French Diary, June 18, 1864, MDAH.

33. Noyes, "Excerpts," 345; Hughes, *Pride of the Confederate Artillery,* 190–91.

34. Storrs, "The Artillery at Kennesaw," 6–7.

35. George S. Storrs, "Kennesaw Mountain," *Southern Bivouac* 1 (December 1882): 135–40.

36. Smith Journal, May 27, 1864, TSLA; *Memphis Appeal,* June 20, 1864.

37. Neal to father, June 20, 1864, Neal Letters, Emory University.

38. Little and Maxwell, *History of Lumsden's Battery,* 43; *New York Tribune,* July 1, 1864.

39. Hughes, *Pride of the Confederate Artillery,* 190; Hughes, *Stephenson,* 199.

40. Thompson, *History of the Orphan Brigade,* 271; Hambleton Tapp and James C. Klotter, eds., *The Union, the Civil War and John W. Tuttle: A Kentucky Captain's Account* (Frankfort, Ky., 1980), 196–97.

41. *Memphis Appeal,* June 23, 25, 1864; *OR,* 38 (pt. 1): 496.

42. Loren J. Morse, *Civil War Diaries and Letters of Bliss Morse* (Wagoner, Okla., 1985), 133–34; William Forbes, *Haulin' Brass: Capt. Croft's Flying Artillery Battery, Columbus, Georgia* (Dayton, 1993), 194–95.

43. McWhiney and Jamieson, *Attack and Die,* 125.

44. Smith Journal, June 27, 1864, TSLA.

45. *OR,* 38 (pt. 3): 878–79, 900, 968; Storrs, "Artillery on Kennesaw," 7.

46. Noyes, "Excerpts," 345.

47. French Diary, July 2, 1864, MDAH; *Memphis Appeal,* July 3, 1864.

48. Jones Diary, July 1, 1864, GPL; Mathis, *In the Land of the Living,* 103; *OR,* 38 (pt. 5): 864–65.

49. Tower, *Carolinian Goes to War,* 196. Back on May 28, a Kentuckian in Bate's division had written: "We captured one of them [Yankees], and he told Gen'l Bate that our sharpshooting is excellent, but that our artillery is 'not worth a d—m.'" Davis, *Diary of a Confederate Soldier,* 132.

50. William R. Scaife, "The Chattahoochee River Line: An American Maginot," *North & South* 1 (November 1977): 42–58; Hughes, *Stephenson,* 203–4. For additional comments, see Andrew Haughton, *Training Tactics and Leadership in the Confederate Army of Tennessee* (London, 2000), 153–54.

51. Charles W. Wills, *Army Life of an Illinois Soldier* (Carbondale, Ill., 1996), 276.

52. Mathis, *In the Land of the Living,* 101, 103.

53. David Evans, *Sherman's Horsemen: Union Cavalry Operations in the Atlanta Campaign* (Bloomington, Ind., 1996), 60–61.

54. Noyes, "Excerpts," 347; *SOR* 23:603.

Chapter 12. "Those Brave Cannoneers"

1. Cate, *Two Soldiers,* 89; Sam B. Dunlap, "Experiences on the Hood Campaign," *CV* 16 (April 1908): 187; Neal to father, July 20, 1864, A. J. Neal Letters, Emory University; Douglas, *Douglas' Texas Battery,* 114; *OR,* 38 (pt. 3): 679; Gustavus W. Smith, "The Georgia Militia about Atlanta," in Richard C. Johnson and Clarence C. Buel, eds., *B and L* (reprint, New York, 1956), 5:332.

2. Wright to Mackall, March 3, 1864, Letters and Telegrams Sent, Atlanta Arsenal, chap. 4, vol. 16, NARG 109; *OR,* 38 (pt. 3): 684; Johnston, "Opposing Sherman's Advance to Atlanta," 274.

3. Hughes, *Pride of the Confederate Artillery,* 197–98; Hughes, *Stephenson,* 214.

4. *OR,* 38 (pt. 3): 926, 967–69; Selden's Battery, Alabama Battery File, ADAH; McMurry, *Hood,* 143.

5. Cate, *Two Soldiers,* 92.

6. Hughes, *Stephenson,* 218–19.

7. Ibid., 94–95; Thompson, *History of the Orphan Brigade,* 261.

8. Cate, *Two Soldiers,* 96; *OR,* 38 (pt. 3): 967.

9. Castel, *Decision in the West,* 397–98.

10. Douglas to Sallie, July 23, 1864, Douglas, *Douglas' Texas Battery,* 115–16.

11. *OR,* 38 (pt. 3): 819–20.

12. Ibid., 38 (pt. 1): 124, (pt. 3): 967; Cate, *Two Soldiers,* 101, 111; Douglas to Sallie, July 26, 1864, Douglas, *Douglas' Texas Battery,* 118.

13. *OR,* 38 (pt. 3): 674; Mark M. Boatner, *Civil War Dictionary* (New York, 1961), 703, 758.

14. Tower, *Carolinian Goes to War,* 234–35.

15. Neal to Emma, August 7, 1864, A. J. Neal Letters, Emory University (Lieutenant Neal was killed by a sharpshooter on August 10, 1864); Curt Johnson and Mark McLaughlin, *Civil War Battles* (New York, 1981), 124.

16. Cate, *Two Soldiers,* 117–18.

17. *OR,* 38 (pt. 3): 904–5, (pt. 1): 828; "Artillery Inspection, Army of Tennessee, August 18, 1864," AGIR.

18. Loren J. Morse, ed., *Diaries and Letters of Bliss Morse* (Wagoner, Okla., 1985), 144–45.

19. "Artillery Inspection, Army of Tennessee, August 18, 1864," AGIR.

20. Ibid.; Cate, *Two Soldiers,* 106–7.

21. Evans, *Sherman's Horsemen,* 452–53; *Atlanta Journal,* August 10, 1901; Forbes, *Haulin' Brass,* 208–13.

22. Hughes, *Stephenson,* 235–36.

23. Joseph Erwin, "Swett's Battery at Jonesboro," *CV* 12 (1904): 112; Cate, *Two Soldiers,* 126–27; *OR,* 38 (pt. 3): 685. See also Thaddeus C. S. Brown, Samuel J. Murphey, and William G. Putney, *Behind the Guns: The History of* Battery *I, 2nd Regiment, Illinois Light Artillery* (Carbondale, Ill., 1965), 111, for a description of the duel between Battery I, First Illinois Light Artillery and Swett's battery.

24. Smith Journal, TSLA; Hood, *Advance and Retreat,* 208; Cate, *Two Soldiers,* 129; *OR,* 38 (pt. 3): 684–85.

25. *OR,* 38 (pt. 3): 684–85; Cate, *Two Soldiers,* 133; "Report of the Reserve Artillery at Macon," n.d., Army of Tennessee Papers, DU. The seventy wagons of the artillery reserve were redistributed among the divisions. *OR,* 39 (pt. 3): 829; Richard W. Iobst, *Civil War Macon* (Macon, 1999), 349–50.

26. Connelly, *Army of the Heartland,* 467; *OR,* 32 (pt. 3): 687, 38 (pt. 3): 683.

27. "Artillery Inspection, Army of Tennessee, August 18, 1864," AGIR; Brewer, *Alabama,* 700; Lindsley, *Military Annals,* 826; Robert S. Bevier, *History of the First*

and Second Missouri Confederate Brigades, 1861–1865 (St. Louis, 1879), 191; Hughes, *Stephenson*, 235; *SOR* 7:82.

28. Frank E. Vandiver, "General Hood as Logistician," *Military Analysis of the Civil War* (Millwood, N.Y., 1977), 144–47; "Artillery Inspection, Army of Tennessee, September 20, 1864," AGIR; September 15, 1864 endorsement on W. C. Duxbury Report, MDAH.

29. *OR*, 38 (pt. 1): 124–25, (pt. 3): 684–85.

Chapter 13. The Final Campaign

1. Connelly, *Autumn of Glory*, 467, 470; Jones Diary, September 19, 1864, GPL; Cate, *Two Soldiers*, 137.

2. "Artillery Inspection, Army of Tennessee, September 20, 1864," AGIR; Cate, *Two Soldiers*, 133, 135; Lindsley, *Military Annals*, 829; Civil War Centennial Commission, *Tennesseans in the Civil War*, 1:124; Smith, "Georgia Militia during Sherman's March to the Sea," 667.

3. James I. Robertson Jr., *Stonewall Jackson: The Man, the Soldier, the Legend* (New York, 1997), 383, 858n97; McMurry, *Virginia Military Institute*, 217.

4. "Artillery Inspection, Army of Tennessee, September 20, 1864," AGIR; Wise, *Long Arm of Lee*, 832.

5. Jones Diary, September 25, 1864, GPL.

6. *OR*, 45 (pt. 1): 683–84.

7. Wise, *Long Arm of Lee*, 830–31; Warner, *Generals in Gray*, 82–83; Richard J. Sommers, *Richmond Redeemed: The Siege at Petersburg* (Garden City, N.Y., 1981), 17.

8. Wiley Sword, *Embrace an Angry Wind: The Confederacy's Last Hurrah: Spring Hill, Franklin, and Nashville* (New York, 1992), 45–46, 54; Hood, *Advance and Retreat*, 166.

9. Thomas R. Hay, *Hood's Tennessee Campaign* (reprint, Dayton, 1976), 46–47; *OR*, 39 (pt. 3): 805; Douglas to wife, October 9, 1864, Douglas, *Douglas' Texas Battery*, 141; Ritter, "Sketch of the Third Battery," 170.

10. "Report of Darden's Battery, Myrick's Battalion, Stewart's Corps Artillery, November 3, 1864," Joseph Jones Collection, TU.

11. *OR*, 39 (pt. 1): 698–99.

12. Ibid., (pt. 2): 888–89.

13. Muriel Phillips Joslyn, *Charlotte's Boys: Civil War Letters of the Branch Family of Savannah* (Berryville, Va., 1996), 285.

14. Morton, *Artillery of Nathan Bedford Forrest's Cavalry*, 267.

15. *OR*, 45 (pt. 1): 1211, 1218, 1219, 1220, 1253.

16. Ibid., 657, 719.

17. Hay, *Hood's Tennessee Campaign*, 83–85; Dunlap, "Experiences on the Hood Campaign," 187; Little and Maxwell, *History of Lumsden's Battery*, 54.

18. Herman Hattaway, *General S. D. Lee* (Jackson, Miss., 1976), 830; Hood, *Advance and Retreat,* 291; Hughes, *Stephenson,* 279.

19. Dunlap, "Experiences on the Hood Campaign," 389.

20. Hood, *Advance and Retreat,* 293; Jacob D. Cox, *The March to the Sea* (New York, 1882), 83; Douglas, *Douglas' Texas Battery,* 212; *OR,* 45 (pt. 1): 691, 743; Morton, *Artillery of Nathan Bedford Forrest's Cavalry,* 275–76; Hay, *Hood's Tennessee Campaign,* 134; Hay, *Cleburne and His Command,* 58.

21. Connelly, *Autumn of Glory,* 503–4; Hattaway, *General S. D. Lee,* 137.

22. *OR,* 45 (pt. 1): 683, 687, 1253, 1258; Douglas, *Douglas' Texas Battery,* 150; Hughes, *Pride of the Confederate Artillery,* 225.

23. *OR,* 45 (pt. 1): 663, (pt. 2): 651, 685.

24. Ibid., (pt. 1): 1255; Lindsley, *Military Annals,* 831.

25. Cate, *Two Soldiers,* 159, 162; Stanley F. Horn, *The Decisive Battle of Nashville* (Knoxville, 1957), 34; Connelly, *Autumn of Glory,* 507–8; *OR,* 45 (pt. 2): 641.

26. Hughes, *Pride of the Confederate Artillery,* 232–37.

27. Cate, *Two Soldiers,* 166.

28. Hughes, *Pride of the Confederate Artillery,* 248.

29. Cate, *Two Soldiers,* 167–68; Connelly, *Autumn of Glory,* 509.

30. Harwell, *Kate,* 252.

31. Little and Maxwell, *History of Lumsden's Battery,* 56. Lumsden survived the war only to be killed in a lumber manufacturing accident three years later. *Register of Former Cadets,* 28.

32. Harwell, *Kate,* 252.

33. Horn, *Decisive Battle of Nashville,* 145; *OR,* 45 (pt. 2): 194–95; Brewer, *Alabama,* 699, 704; Eggleston, "Eggleston Diary," 356.

34. Marshall's battery was at Columbia and Fenner's at Murfreesboro. Two guns of the Washington Artillery had been captured at Murfreesboro on December 7. A section of Parrott rifles from Stewart's corps apparently still operated with Chalmers's cavalry. *OR,* 45 (pt. 1): 755, (pt. 2): 691.

35. *OR,* 45 (pt. 1): 68, 323, 688, 691–92.

36. Ibid., 498.

37. Ibid., 695; Ritter, "Sketch of the Third Battery," 542–44.

38. Sword, *Embrace an Angry Wind,* 359–61.

39. Horn, *Decisive Battle of Nashville,* 111, 118–19; Cox, *March to the Sea,* 118; Connelly, *Autumn of Glory,* 511.

40. Horn, *Decisive Battle of Nashville,* 145.

41. *OR,* 45 (pt. 1): 692; Ed W. Smith, "Douglas' Texas Battery at the Battle of Nashville," *CV* 12 (November 1904): 531–32.

42. Ritter, "Sketch of the Third Maryland Battery," 543.

43. *OR,* 45 (pt. 1): 692, 707; Charles E. Fenner to S. D. Lee, June 28, 1904, Eufaula Light Artillery, ADAH.

44. Hughes, *Pride of the Confederate Artillery,* 252–53.

45. Fenner to Lee, June 28, 1904, Eufaula Light Artillery, ADAH; *OR*, 45 (pt. 1): 692; Connelly, *Autumn of Glory*, 511.

46. Lindsley, *Military Annals*, 831; *SOR* 7:83.

47. *OR*, 45 (pt. 1): 692.

48. T. G. Dabney, "Gen. A. P. Stewart on Strong Topics," *CV* 17 (January 1909): 31–32; Sword, *Embrace an Angry Wind*, 421.

49. Hood, *Advance and Retreat*, 422; Connelly, *Autumn of Glory*, 513; Cate, *Two Soldiers*, 174.

50. *OR*, 45 (pt. 1): 682.

51. Horn, *Army of Tennessee*, 422; Connelly, *Autumn of Glory*, 513; Cate, *Two Soldiers*, 174.

52. Cate, *Two Soldiers*, 180; Douglas, *Douglas' Texas Battery*, 152.

53. *OR*, 49 (pt. 1): 1047. Batteries ordered to Mobile included Dent, Douglas, Garrity, Eufaula, Fenner, Rowan, Lumsden, Tarrent, Cowan, Perry, Phelan, Turner, Mebane, and Slocomb.

54. Ritter, "Sketch of the Third Maryland Battery," 172.

55. Cate, *Two Soldiers*, 183, 185, 186, 187.

56. Ibid., 187–88, 196, 197; Lindsley, *Military Annals*, 836.

57. *OR*, 42 (pt. 2): 1084–85.

58. Ibid., 47 (pt. 2): 1323, 1436, 1441, 1445, 49 (pt. 2): 1146.

59. Lindsley, *Military Annals*, 838–40.

60. *OR*, 47 (pt. 3): 808; Brewer, *Alabama*, 703, 704.

Bibliographical Essay

A basic source for this study was the *Official Records of the Union and Confederate Armies* (Washington, D. C., 1880–1902). Although the ORs are indispensable for understanding the artillery's role in some battles, they do not include any Confederate After Action Reports for Perryville and Chattanooga or the Atlanta and Tennessee campaigns. Fortunately, the more recent *Supplement to the Official Records of the Union and Confederate Armies* (Wilmington, N.C., 1994–99) revealed several (especially for the Battle of Missionary Ridge) heretofore unpublished reports. For some unknown reason, the rather lengthy Rice Graves After Action Report of the Battle of Stones River did not get into the last. Fortunately, it is extant in the John C. Breckinridge Papers, New York Historical Society. "Report of Darden's Battery, Myrick's Battalion, Stewart's Corps Artillery, November 3, 1864," in Joseph Jones Papers, Tulane University, is another unpublished report.

The single most important collection of personal papers dealing with the western long arm is the Henry C. Semple Papers, Alabama Department of Archives and History. Numerous unpublished documents relating to this subject are also in the Braxton Bragg Papers, William P. Palmer Collection, Western Reserve Historical Society, Cleveland, Ohio. The W. W. Carnes Papers at the Chickamauga-Chattanooga National Military Park are mostly postwar letters written to the National Park Service by the then old veteran to correctly (in his view) fix the location of his battery at the Battle of Lookout Mountain.

The Inspection Records and Related Reports Received by the Inspector's Branch of the Confederate Adjutant General's Office, National Archives Record Group 109, and W. C. Duxbury Report, April 25, 1864, Ordnance

Department Correspondence, vol. 111, Record Group 9, Mississippi Department of Archives and History, are excellent sources concerning the state of the artillery at various times during the period 1863–64. Two additional collections in National Archives Record Group 109 include General and Special Orders by Colonel M. L. Clark, chap. 4, vol. 212, and Army of the West, Letters Sent, chap. 2, vol. 266. Both give information on the batteries of the old Army of the West in the spring of 1862.

Copies of the correspondence of army Chief of Ordnance Hypolite Oladowski are in Letters Sent, Ordnance Officer, Army of Tennessee, chap. 4, vol. 141, National Archives Record Group 109. Many of these letters detail the armament modernization undertaken in 1863. The Hypolite Oladowski Papers, Duke University, unfortunately contain only a few fragmentary documents.

The diaries of two officers and seven enlisted men are known to survive, and though none spans the entire war, they provide valuable insight into life in the western artillery. Included are Wirt A. Cate, ed., *Two Soldiers: The Campaign Diaries of Thomas J. Key, C.S.A., and Robert J. Campbell, U.S.A.* (Chapel Hill, N.C., 1938); John Euclid Magee Diary, Duke University, portions of which have now been printed in the *Supplement to the Official Records;* George W. Jones Diary, a complete copy of which can be found in the Stanford Mississippi Battery File at the Chickamauga-Chattanooga National Military Park; Edward Noyes, ed., "Excerpts of the Civil War Diary of E. T. Eggleston," *Tennessee Historical Quarterly* 17 (December 1958): 336–58; David A. Welker, ed., *A Keystone Rebel: The Civil War Diary of Joseph Garey, Hudson's Battery Mississippi Volunteers* (Gettysburg, 1996); James Searcy Diary and Letters, Alabama Department of Archives and History, portions of which are in Maxwell Elebash, "The Correspondence of Confederate Soldiers James T. and Reuben M. Searcy," *Alabama Heritage* 31 (Winter 1994): 28–39. The George A. Grammer Diary, Mississippi Department of Archives and History, despite its terse entries, covers the longest span of time of any of the diaries. The Edwin Massina Diary (Washington Artillery) is at Emory University, and the Captain John H. Guy Journal is at the Virginia Historical Society. The last details the role of his battery during the Fort Donelson period. No study of the Army of Tennessee's artillery is complete without the use of all of these diaries, which put a "face" on the cannoneers.

In addition, the human angle is revealed in the invaluable letters of artillerymen Andrew J. Neal, Emory University (with copies at the Chickamauga-Chattanooga and Kennesaw National military parks); B. H. Green of the Washington Artillery, Emory University; S. H. Dent, Alabama Department of Archives and History; Richard L. Pugh, Louisiana State University, partially transcribed in Barnes F. Lathrop, "A Confederate Artilleryman at Shiloh," *Civil War History* 8 (December 1962): 373–85; James Douglas in Lucia R. Douglas, ed., *Douglas' Texas Battery, C.S.A.* (Waco, Tex., 1966); Albert B. Fall, in "Civil War Letters of Albert Boult Fall, Gunner for the Confederacy," *Register of the Kentucky Historical Society* 59 (April 1961): 150–68; Isaac Thomas, in Greenville, Mississippi, Public Library. The Ed Goelet Letters, Southern Historical Collection, University of North Carolina, were written by a staff officer of Major Melancthon Smith and offer brief but important snippets.

Ray Mathis, ed., *In the Land of the Living: Wartime Letters from the Chattahoochee Valley of Alabama and Georgia* (Troy, Ala., 1981) contains the letters of several artillerymen, notably Captain S. H. Dent and Lieutenant Colonel James Bondurant.

Several single but highly important letters are extant detailing battery actions in certain battles. Richard B. Harwell, ed., *The Journal of a Confederate Nurse by Kate Jackson* (Baton Rouge, 1959), 252, offers a letter from a cannoneer in the Battle of Nashville. A letter by "L. D. G." concerning the Battle of Shiloh is found in Gage's Alabama Battery File, Alabama Department of Archives and History. An undated, but certainly postwar, letter written by Captain James Culpeper and in the possession of Rett Floyd of Turberville, South Carolina, is so detailed about his battery's role at Chickamauga that it may have been intended to help locate a plaque at the park. A postwar letter by Felix Robertson, in the Thirteenth Ohio Battery File, Shiloh National Military Park, tells of his company's role in stampeding a Federal battery. The June 1863 letter of Captain Overton W. Barret to his mother, in Army of Tennessee Misc. Papers, 1862–63, Duke University, proved an exciting find.

Crucial biographical information concerning the army's artillery officer corps is contained in Military Service Files, National Archives, and two pamphlets at West Point: "1887 Annual Reunion of the Association of Graduates, U.S. Military Academy, West Point, New York," and Mary Elizabeth

Sergeant, "They Lie Forgotten." Minor material can also be found in *Biographical Register of the Officers and Graduates of the U.S. Military Academy from 1802 to 1867* (New York, 1879), and George W. Cullum, *Biographical Register of the Officers and Graduates of the U.S. Military Academy from 1802 to 1867*, 2 vols. (New York, 1879). Richard McMurry, *Virginia Military Institute Alumni in the Civil War* (Lynchburg, 1990), has material on the few VMI officers in the western artillery.

James H. Colgin, ed., "The Life Story of Brig. Gen. Felix Robertson," *Texana* 8 (Spring 1979): 154–82, is surprisingly silent on the numerous controversies that surround his career. Two standard works, Ezra J. Warner, *Generals in Gray* (Baton Rouge, 1961), and Mark M. Boatner, *Civil War Dictionary* (New York, 1961), offered biographical data on artillery officers who held the rank of general. "Capt. Minor W. Havis," in Havis's Georgia Battery File, Chickamauga-Chattanooga National Military Park, offers background on that officer. The "List of Officers of the Corps of Artillery of Tennessee," Benjamin F. Cheatham Papers, Tennessee State Library and Archives, outlines the educational and military backgrounds of that state's battery commanders. J. A. Chalaron, "Memories of Rice Graves, C.S.A.," *Daviess County Historical Quarterly* 3 (1985): 3–13, tells of his personal association with that young officer, especially at the Battle of Stones River.

Confederate Veteran offers brief sketches of a number of artillery commanders. These include "Capt. Thomas L. Massenburg," 12 (December 1908): 630–31; "Forrest's Chief of Artillery: Morton," 8 (April 1900): 116–17; "Robert Cobb, Maj. Gen. UCV," 4 (April 1894): 103; Joseph A. Wilson, "Bledsoe of Missouri," 7 (October 1899): 462–63; "Young Artillery Captains," 6 (June 1895): 175; "Major James P. Douglas," 10 (July 1902): 322; "Dr. Harvey Shannon," 15 (March 1907): 131–32; and "Major John W. Eldridge," 21 (July 1913): 352.

Several artillery field officers wrote helpful works concerning specific actions. The most significant of these is Melancthon Smith, "Journal of the Atlanta Campaign," Tennessee State Library and Archives. Postwar reminiscences include Francis A. Shoup, "How We Went to Shiloh," *Confederate Veteran* 2 (May 1894): 137–40; George S. Storrs, "The Artillery at Kennesaw," *Kennesaw Gazette*, June 17, 1889, 6–7; and, by the same officer, "Kennesaw Mountain," *Southern Bivouac* 1 (December 1882): 135–40.

A number of articles written by western artillerymen are important in filling the gaps that exist in the ORs. In *Confederate Veteran,* these include W. W. Carnes, "The Artillery at Perryville," 33 (1925): 8–9, and "At Missionary Ridge," 20 (May 1920): 185; W. H. Smith, "Melancthon Smith's Battery," 12 (November 1904): 532; Ed W. Smith, "Douglas' Battery in the Battle of Nashville," 12 (November 1904): 531–32; "Rutledge's Battery," 36 (July 1928): 259–60; James G. Holmes, "The Artillery at Bentonville," 3 (April 1895): 103; Joseph Erwin, "Swett's Battery at Jonesboro," 12 (March 1904): 112; Sam B. Dunlap, "Experiences on the Hood Campaign," 16 (April 1908): 187; T. G. Dabney, "General A. P. Stewart on Strong Topics," 17 (January 1909): 281–83; and "Gracey-Chickamauga-Whitaker," 6 (1895): 251. Among the articles in the *Southern Historical Society Papers* are Thomas L. Riddell, "Movements of the Goochland Artillery," 24 (1896): 316–23, and J. A. Chalaron, "Battle Echoes from Shiloh," 21 (1893): 215–24. Also significant is "Guibor's Missouri Battery," *Kennesaw Gazette,* May 15, 1889, 2–3. Less important, but still of some value, is an article by an unidentified gunner in Waters's Alabama Battery in "The Battle of Missionary Ridge," *Southern Bivouac* 2 (January 1884): 199–200.

Composite battery sketches are presented in Dunbar Rowland, *The Official and Statistical Register of Mississippi* (Nashville, 1908); John B. Lindsley, ed., *The Military Annals of Tennessee, Confederate* (Nashville, 1886); Civil War Centennial Commission, *Tennesseans in the Civil War,* vol. 1 (Nashville, 1964); Willis Brewer, *Alabama: Her History, Resources, War Record, and Public Men from 1540–1872* (Montgomery, 1872).

Only one modern history of a battery exists: Nathaniel C. Hughes, *The Pride of the Confederate Artillery: The Washington Artillery in the Army of Tennessee* (Baton Rouge, 1967). In scope, research, and analysis, there is no western unit history, North or South, that surpasses it. Other published sources related to the Fifth Company Washington Artillery include William B. Owen, *In Camp and Battle with the Washington Artillery* (Boston, 1885), which is regrettably short as related to the Fifth Company; J. B. Walton, "Sketches of the History of the Washington Artillery," *Southern Historical Society Papers* 11 (1883): 210–17; and J. B. Chalaron's article titled "Vivid Experiences at Chickamauga," *Confederate Veteran* 3 (1895): 278–79. The order book, manuscripts, and reminiscences in the Washington Artillery

Papers, Louisiana Historical Collection, Tulane University, fill in some gaps, but much of the material regarding the Fifth Company concerns the 1865 tour of duty in Mobile.

Other unit histories are rare. The most complete is George Little and James R. Maxwell, *A History of Lumsden's Battery* (Tuscaloosa, Ala., 1905). William L. Ritter wrote a series of articles on an outfit that became Rowan's Georgia Battery in "Sketch of the Third Battery of Maryland Artillery," *Southern Historical Society Papers* 12 (1883): 113–18, 186–93, 433–42, 537–44 and 12 (1884): 170–72. Background on the western horse artillery, and specifically Morton's Tennessee Battery, is contained in John W. Morton, *The Artillery of Nathan Bedford Forrest's Cavalry* (Kennesaw, Ga., 1962). William Forbes II, *Haulin' Brass: Capt. Croft's Flying Artillery Battery, Columbus, Georgia* (Dayton, 1993), though limited, does offer some material on Croft's battery during the Atlanta campaign.

William R. Talley's "A History of Havis' Georgia Battery," typescript at Kennesaw National Battlefield Park, and W. R. Brown's "A History of Stanford's Mississippi Battery," typescript at the Greenwood, Mississippi, Public Library, offer surprisingly little crucial material considering their length. On the other hand, W. A. Pickering's "The Washington Artillery of Augusta, Ga.," *Confederate Veteran* 17 (1909): 24–26, is brief but significant. "History of Fenner's Battery, August 8, 1891," Thomas C. Porteous Papers, Louisiana State University, and "A Brief History of Howell's Battery of Light Artillery," in Howell's Georgia Battery File, Chickamauga-Chattanooga National Military Park, offer only minor assistance. Melancthon Smith wrote a short article on his battery, "Melancthon Smith's Battery," *Confederate Veteran* 12 (November 1904): 532. "Byrne's Battery," in John Joyce Jr. Papers, in Filson Club, Louisville, Kentucky, and "The Storey [*sic*] of Guibor's Battery, C.S.A," Box 1, Civil War Papers, Missouri Historical Society, St. Louis, both give interesting anecdotal stories by the veterans who wrote them.

Many unit histories are now posted on the Internet, but most amount to little. Sidney Wilder, "Sketch of Semple's Battery: Its Record in the Great War," U.S. Military History/Civil War Unit Histories/Semple's Battery (accessed under the heading "Alabama Artillery Batteries" in Google), a unit history/memoir, is the only one as of this writing that offers anything of value.

Two highly significant unit history/memoir accounts by battery com-

manders have emerged: "Swett's Battery–Warren Light Artillery, by Charles Swett," typescript at Shiloh National Military Park, and William W. Carnes Memoirs, in possession of William W. Carnes II, St. Pete Beach, Florida. Both are priceless and offer details not found elsewhere. (Some of the material in the last appears in Carnes's articles in the *Confederate Veteran.*) The most valuable published memoir is Nathaniel C. Hughes Jr., *The Civil War Memoir of Philip Daingerfield Stephenson: Private, Company K, 13th Arkansas Volunteer Infantry, Loader, Piece No. 4, 5th Company, Washington Artillery, Army of Tennessee, C.S.A.* (Conway, Ark., 1995), which relates Stephenson's experiences in the Washington Artillery from early 1864 to the end of the war.

Smaller and less significant memoirs include the William B. Hammett Memoir, Jefferson Mississippi Artillery File, Chickamauga-Chattanooga National Military Park, and W. T. Charles, *Recollections of a Christmas during "The War" 1862–1863* (privately published, 1959).

The most significant modern "find" related to the Army of Tennessee was not written by an artillery officer, but one of the army's brigadier generals: R. Lockwood Tower, ed., *A Carolinian Goes to War: The Civil War Narrative of Arthur Middleton Manigault* (Columbia, S.C., 1983). Manigault was opinionated on most subjects, the artillery included, and his comments, though not always complimentary, help complete the whole story.

The National Archives contains files and muster rolls for a number of batteries. The amount of information available varies from company to company, but not infrequently nuggets can be discovered. The same is true of the Alabama Artillery Files, Alabama Department of Archives and History. "Compilation of Arkansas Batteries," Arkansas Historical Society, is not significant.

Given the state of Civil War scholarship today, no study would be complete without a thorough examination of contemporary newspapers. The most significant finds included the "Leigh" letters in the *Memphis Appeal,* written by a member of Stanford's battery, and a letter written by Captain Thomas L. Massenburg in the *Macon Telegraph,* giving the details of how his battery was lost at Missionary Ridge. The *Mobile Advertiser and Register* contains both a letter from a member of Gage's battery about the Battle of Shiloh and a list of the batteries and the number of guns that they lost at Missionary Ridge. Other papers examined included the *Atlanta Jour-*

nal, Charleston Courier, Charleston Mercury, Chattanooga Rebel, Chicago Times, Cincinnati Commercial, Indianapolis Daily Journal, Memphis Avalanche, Nashville Union and American, New Orleans Daily Crescent, New Orleans Delta, New Orleans Picayune, New Orleans Times, New York Tribune, and *Richmond Examiner.*

Jennings C. Wise, *The Long Arm of Lee: The History of the Artillery Corps of the Army of Northern Virginia* (New York, 1959), offers the opportunity to compare the experiences of the Army of Tennessee's artillery with that of its sister army. Unfortunately, Colonel Wise chose not to treat the life of the common artillerymen or the interactions among the officer corps, and he rarely veered from the ORs.

Edwin C. Bearss, "Shiloh Artillery Study," Project No. 17, Shiloh National Military Park, and "Stones River: The Artillery at 4:45 P.M., Jan. 2, 1863," *Civil War Times Illustrated* 2 (February 1964): 38–39, though marred by several errors, are basically sound studies that detail the armament composition of various batteries.

Among the works dealing with the Civil War artillery, Warren Ripley's *Artillery and Ammunition of the Civil War* (New York, 1970) is the primer on the subject. The "bible," however, is James C. Hazlett, Edwin Olmstead, and M. Hume Parks, *Field Artillery Weapons of the Civil War* (Cranbury, N.J., 1983), which includes the hard-to-find Hazlett articles in the *Military Collector and Historian.* The most concise study of the tactical use of artillery both prior to and during the war is presented in several chapters in Grady McWhiney and Perry D. Jamieson, *Attack and Die: Civil War Military Tactics and the Southern Heritage* (Tuscaloosa, Ala., 1982). Andrew Haughton's *Training, Tactics, and Leadership in the Confederate Army of Tennessee* (London, 2000) has almost nothing on the artillery.

More than thirty-five years after their initial appearance, Thomas L. Connelly's comprehensive command-level study of the Army of Tennessee in *Army of the Heartland: The Army of Tennessee, 1861–1862* (Baton Rouge, 1967) and *Autumn of Glory: The Army of Tennessee, 1862–1865* (Baton Rouge, 1971) still remains the definitive study on the subject.

A flood of secondary works have been published since the original appearance of this volume, and they are too many to detail here. I simply mention Peter Cozzen's trilogy on the 1863 Tennessee campaigns: *No Better*

Place to Die: The Battle of Stones River (Urbana, Ill., 1990); *This Terrible Sound: The Battle of Chickamauga* (Urbana, Ill., 1992); and *The Shipwreck of Their Hopes: The Battles for Chattanooga* (Urbana, Ill., 1994); in addition see Albert Castel's iconoclastic volume on the Atlanta campaign, *Decision in the West: The Atlanta Campaign of 1864* (Lawrence, Kans., 1992).

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